



THE UNIVERSITY OF  
**WESTERN  
AUSTRALIA**



UWA  
Public Policy  
Institute

# Our Priorities: Sharing Prosperity

UWA Capability Statement



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## UWA Capability Statement



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## Introduction

**The Western Australian Government's Our Priorities: Sharing Prosperity aims to deliver better outcomes for all in Western Australia.**

The University of Western Australia, as a proud WA civic institution, and one of the world's top 100 universities, is committed to helping the Government and other stakeholders meet those objectives.

The University is home to a number of highly acclaimed researchers, research centres and institutes which produce research findings and evidence directly relevant to the issues raised in Our Priorities: Sharing Prosperity, and capabilities of each of these are described here.

This UWA Capability Statement is based on our mission as an assured world class university working for and on behalf of the public interest in our State.

This means:

- We support our researchers and students to be involved in healthy, collaborative relationships with government and policy practitioners.
- We nurture and value relationships to release the insights from the highest quality research and inform government decisions.
- We work as an active partner to shape better informed policies and programs to improve people's lives.

The newly established UWA Public Policy Institute is working to expand our engagement activities and support better and wider use of our expertise to tackle complex policy problems. UWA PPI is also leading on innovation in how reliable, trusted evidence can be used as an on-going resource for government.



# 1: A strong economy

## Create jobs, repair the State's finances

### UWA researchers and research projects that support this priority:

- Jakob Madsen (commodity markets and growth)
- Tim Mazzarol (entrepreneurship, innovation, small business management, markets)
- Kirsten Martinus (urban and socio-economic factors that increase economic competitiveness and mitigate uneven development)
- David Gilchrist (public sector governance, financial management and reporting, human services delivery and sustainability)
- Caleb Goods ("gigification" of work economy)
- Julia Powles (civic and rights based responses to emerging technologies)

### UWA Centres and Institutes that support this priority:

- **UWA Public Policy Institute** (UWA PPI) is a bridge between academic research and government, public and business needs, delivering real-world policy impact.
- **UWA Business School** is one of the premier business schools in the Asia-Pacific region.
- **Africa Research & Engagement Centre (AfREC)**, Australia's premier research entity dedicated to fostering sustainable economic and social ties with Africa.

# 2: A bright future

## Improve the health and wellbeing of children in the early years

### UWA researchers and research projects that support this priority:

- Valerie Verhasselt (impact of maternal milk on immune development in the neonate)
- Jane Pillow, Karen Simmer, Tobias Strunk (neonatal respiratory physiology – development of technology and treatments that improve outcomes in preterm infants)
- Jeneva Ohan (mental health challenges in children, and social challenges that prevent help-seeking)
- Michael Rosenberg (physical activity as an intervention to optimise child health and development)
- Caitlin Wyrwoll (early life environment and effects on placental development and function)
- Livia Hool (effects of Duchenne Muscular Dystrophy on cardiovascular function in young boys)
- Murray Maybery (child development and cognitive disorders, including autism)
- Kimberley Wang (foetal origins of respiratory disease)
- Peter Noble (early life origins of obstructive airway disease)
- Carmela Pestell (ADHD and FASD, acquired brain injury in children)
- Bonnie Furzer (exercise and mental health in children)
- Andrew Page (suicide and self-harm risk across the lifespan)
- Sean Hood, David Lawrence, Andrew Page, Michael Small (Young Lives Matter Foundation, saving lives by developing a tool to assess and predict the risk of suicidal behaviour, acting as a catalyst to activate required support services when they are needed most)

### UWA Centres and Institutes that support this priority:

- **Child and Adolescent Development and Health Discipline**
- **NHMRC Centre for Research Excellence in Improving Health Services for Aboriginal and Torres Strait Islander children (ISAC)**
- **Centre for Neonatal Research and Education**

## Increase student reading and numeracy

### UWA researchers and research projects that support this priority:

- Research project in making education more affective – focussing on processes such as student motivation, learning and study approaches, and attitudes and confidence, while looking at attributes such as the development of positive values, ethical attitudes, and interpersonal skills.
- “A Bright Path to Learning” project, which focuses on conducting high-quality assessments in difficult-to-assess learning areas such as extended performances.
- Valerie Faulkner and Grace Oakley (literacy in years 7-9).
- Mark Pegrum (the future of digital technologies in education).
- Gerardine Neylon (play-based learning).
- Tom O’Donoghue (curriculum theory, application to leadership in challenging circumstances).
- UWA Academy for Young Mathematicians, an enrichment programme in Mathematics organised by the Department of Mathematics and Statistics of The University of Western Australia for high school students.

### UWA Centres and Institutes that support this priority:

- **UWA Graduate School of Education**
- **UWA School of Mathematics and Statistics**
- **PIPS (Performance Indicators in Primary Schools) On-Entry Baseline Assessment** program



## Increase participation in STEM

### UWA researchers and research projects that support this priority:

- UWA is the premiere STEM training university in the state, increasing participation in STEM subjects by graduating thousands of science literate citizens yearly.
- Project in promoting scientific literacy of secondary science students, led by UWA professor Vaille Dawson, uses case study methodology to investigate the use of socioscientific issues (SSI) to promote critical thinking in Year 7 to 10 classes in schools in disadvantaged areas.
- Sally Male (Student Experiences of Threshold Capability Development with Intensive Mode Teaching. An Australian Government Office for Learning and Teaching Strategic Priority Project, Gender inclusivity in engineering education).
- Chris McDonald (computer science education).
- David Blair, Li Ju (Einstein First Project, investigating the ability of schoolchildren to understand Einsteinian physics through class intervention and teacher education. The project also explores family education and public outreach).
- UWA had 97 Indigenous students enrolled in STEM Faculties in 2018, with 17 Indigenous students graduating from STEM degrees in 2018. UWA has graduated a total of 15 Indigenous Doctors in the past 3 years.
- Jill Milroy (Aboriginal education, strategy development for Indigenous STEM engagement).

### UWA Centres and Institutes that support this priority:

- **UWA Graduate School of Education**
- **UWA Girls in Engineering** outreach program inspires female students to take advantage of STEM study and the career pathways available in this area
- **MicroBlitz** citizen science project allowing for surveying and mapping of the microbial composition of soils across WA)
- **VPC** (a virtual experience that allows for exploration and interaction with the inner world of a plant cell)
- **Oceans Institute** (free resources to schools to engage primary and secondary children in marine science)
- **The School of Indigenous Studies' Indigenous Science, Health and Engineering Camp** encourages Indigenous Year 10-11 students from metropolitan, regional and remote schools in WA students to continue maths and science subjects to Year 12, and see science courses as viable career options.
- **The School of Indigenous Studies' Aboriginal Orientation Course** enables Indigenous school leavers with low or no ATAR to study electives in physics, chemistry, maths and human biology which enables them to proceed to undergraduate science degrees with assured places in professional postgraduate degrees such as Medicine, Dentistry and Engineering.

# 3: A safer community

## Reduce youth reoffending

### UWA researchers and research projects that support this priority:

- Researchers from The University of Western Australia's Law School have been studying the feasibility of a justice model that has the potential to improve the effectiveness of crime prevention in Western Australia. The model will see a Community Justice Centre established which is a one stop shop that includes a court, crime prevention team and key support services located in the same location. The centre would work in partnership with the local community to effectively address the underlying causes of crimes.
- Project on improving the lives of children with incarcerated mothers: This project aims to identify how children's experiences of maternal incarceration shape the course of their lives. This study expects to advance the knowledge of the social and financial impact of maternal incarceration by providing critical evidence to inform prevention strategies. The project has the potential to disrupt intergenerational patterns of profound disadvantage through its research.
- Professor Donna Cross has an international reputation for developing community-based interventions to reduce bullying and aggression among children and young people. She is currently an investigator on nine 2-5 year longitudinal research projects developed to prevent bullying, cyberbullying and associated mental health harms among Australian children and adolescents.

### UWA Centres and Institutes that support this priority:

- The **Centre for Indigenous Peoples and Community Justice** delivers high-quality research, scholarship and advocacy on one of the most pressing issues in Western Australia, that of the over-representation of Indigenous peoples in the state's criminal justice and related systems.

## Reduce illicit drug use

### UWA researchers and research projects that support this priority:

- Gary Hulse (innovative drug rehabilitation methods)
- Erin Kely (effects of implant naltrexone)
- Elizabeth Geelhoed (health economics)
- Kellie Bennet (maternal use of opioid pharmacotherapies)
- Sarah Murray (reduce youth reoffending, Community Justice Centre)
- David Preen (improving the lives of children with incarcerated mothers)

### UWA Centres and Institutes that support this priority:

- **UWA School of Medicine, Unit for Research in Alcohol and Drugs**
- **Centre for Clinical Research in Emergency Medicine**



## 4: A liveable environment

### Build Metronet and increase homes close to public transport

#### UWA researchers and research projects that support this priority:

- Sharon Biermann (expert in transport and land use planning)
- Cristina Estima Ramalho (works on design and planning of urban environments in order to make these more liveable and sustainable places)
- Kirsten Martinus (urban economic innovation and corporations)
- Committee for Perth partnership<sup>1</sup> – nearly 100 reports on demography, economic development, liveability
- Paul Maginn (suburbanisation and spatial planning)
- Mariana Atkins (demography, ageing and service provision)
- Bryan Boruff (urban design and health)
- Neil Foley (governance of planning, retailing and planning, open space planning, metropolitan planning, general urban planning issues, planning history and the intersection of waste management and the planning system)

#### UWA Centres and Institutes that support this priority:

- The **Planning and Transport Research Centre (PATREC)**, located at UWA, has established four research programs centred around: integrated land use and transport futures; smarter travel decisions; integrated freight system optimisation; and network optimisation and intelligence.
- The **Australian Urban Design Research Centre (AUDRC)**, located in UWA School of Design, seeks novel solutions to urban challenges, exploring the creation of ecologically integrated cities for people.
- **UWA Public Policy Institute (UWA PPI)** is a bridge between academic research and government, public and business needs, delivering real-world policy impact.

<sup>1</sup> <https://www.committeeforperth.com.au/research/factbase-research>

# Increase conservation for future generations

## UWA researchers and research projects that support this priority:

- Richard Hobbs (restoration ecology)
- Raphael Didham (entomologist interested in biodiversity and biosecurity)
- Julian Clifton (marine conservation, marine planning and marine parks)
- Michael Douglas (ecology and management of tropical ecosystems)
- Tim Langlois (marine conservation, and impact of fisheries and other disturbances)
- Thomas Wernberg (kelp forests and near-shore marine environments)
- Jessica Meeuwig (impact of fisheries)
- Stephen Hopper (land biodiversity conservation)
- Erik Veneklaas (sustainable management of ecosystems for agricultural production, land rehabilitation, etc and conservation of natural ecosystems)
- Dirk Zeller (impact of fisheries)
- Nicki Mitchell (threatened vertebrates, including marine turtles, skinks, numbats)
- Ana Martins Sequeira (marine megafauna)
- Christine Groom (conservation of Carnaby's cockatoos)
- Tim Winter (heritage conservation)
- Benjamin Smith (heritage conservation)
- Ky Gentry (heritage conservation)
- Jo McDonald (heritage conservation)
- Parwinder Kaur (DNA Zoo: facilitating conservation efforts through the rapid generation and release of high-quality genomics resources)
- Len Collard (Noongar language, place names and heritage)

## UWA Centres and Institutes that support this priority:

- **Centre for Rock Art Research + Management (CRAR+M)** works on the conservation of the ancient rock art heritage of Australia.
- **Ecology, People and Place Research Group (EPP)** provides expertise and drives collaboration on problems and issues at the intersection of society and environment.
- **The School of Indigenous Studies** provides studies in Indigenous knowledge, history and heritage which includes on-country experiences.



# Make a cleaner, more sustainable environment

## UWA researchers and research projects that support this priority:

- Jam Hemmi (alternative protein sources for fish food)
- Sasha Jenkins (alternate waste processing streams)
- David Pannell (management of natural resources and the environment)
- Maria Ignatieva (sustainable cities)
- Andrea Gaynor (learning from environmental history)
- Chari Pattiaratchi (plastic waste pathways globally, with an emphasis on the Indian Ocean)
- Kendra Travaille (effectiveness of fishery improvement projects)
- Paula Cartwright (investigating the impact of cyclones and weather events on water quality and marine ecosystems)
- Albert Pessarrodona (kelp forests to mitigate the impact of climate change)
- Kaddambot Siddique (best practices for managing agricultural land while minimising environmental impacts)
- Anas Ghadouani (water resources, ecological and environmental engineering)

## UWA Centres and Institutes that support this priority:

- **Oceans Institute** providing innovative and effective solutions to challenges facing the world's oceans.
- **Institute of Agriculture** clean, green, and ethical production of food.
- **Ecology, People and Place Research Group (EP)** provides expertise and drives collaboration on problems and issues at the intersection of society and environment.

# 5: Aboriginal wellbeing

## Reduce the overrepresentation of Aboriginal people in custody

### UWA researchers and research projects that support this priority:

- Tamara Tulich and Harry Blagg (diversionary responses to the problem of Foetal Alcohol Spectrum Disorders (FASD) on Aboriginal communities in the Kimberley)
- Emma Williams and Harry Blagg (integrating Aboriginal and mainstream strategies in providing support for Aboriginal women escaping family violence)
- Sarah Murray and Harry Blagg (court innovations)
- Harry Blagg (the role of Aboriginal women in community Night Patrols with Dr Thalia Anthony, UTS, and Juanita Sherwood, UNSW)
- Pat Dudgeon (Aboriginal social and emotional well-being, mental health, suicide prevention)

### UWA Centres and Institutes that support this priority:

- The **Centre for Indigenous Peoples and Community Justice** delivers high-quality research, scholarship and advocacy on one of the most pressing issues in Western Australia, that of the over-representation of Indigenous peoples in the state's criminal justice and related systems.
- **Centre for Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention**
- **UWA Poche Centre for Indigenous Health**



# 6: Regional prosperity

## Deliver stronger regional economies

### UWA researchers and research projects that support this priority:

- Amin Muger (farm economics and agribusiness)
- Fay Rola-Rubzen (agribusiness and farm chain analysis)
- Liz Barbour (value-adding to the honey bee product industry)
- Fiona Haslam McKenzie (regional economic development and workforce mobility)
- Sarah Prout (indigenous economic development, services and mobility across WA)
- Paul Plummer (regional economic development and spatial modelling)
- Matthew Tonts (regional demography and economic development)
- Petra Tschakert (new project on community adjustment to climate change and other disruptions in the Wheatbelt)
- Kirsten Martinus (economic development, innovation, FIFO)
- Julia Horsley (State Agreements and Regional Development)
- Tim Mazzarol (co-operative and mutual enterprises)

### UWA Centres and Institutes that support this priority:

- The **Centre for Regional Development** is research intensive, focussing on understanding the major economic, social and environmental opportunities and challenges facing rural, regional and remote Australia. It has undertaken research for, and disseminated information to, a range of national and government agencies, private sector and community organisations and natural resource management groups.
- **UWA Business School** is one of the premier business schools in the Asia-Pacific region.
- The **Co-operative Enterprise Research Unit (CERU)** is a focal point for research, education and outreach activities focusing on the co-operative and mutual enterprise sector.





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