



University of
South Australia



Barbara Hardy
Institute

Sharolyn
Anderson

Research Profile

Research Area Specialisation

Sharolyn's area of research is covered under the broad umbrella of Geographic Information Science; incorporating urban remote sensing, GIS development, Volunteered Geographic Information, and internet mapping. Her work has led to areas of ecosystem service valuation projects at local, national, and global scales with Sharolyn's latest studies involving modelling urban ecological processes from micro to macro scales in Adelaide.

With research undertaken as a collaborative project through multi-disciplinary research teams, Sharolyn's particular focus through her publication record has covered a variety of topical areas, linked with the integration of remote sensing, GIS, GPS, and socio-demographic data to better understand the world.

Contributing to a better and sustainable environment

Sharolyn's area of expertise in spatial data acquisition, representation, and analysis contributes to understanding the significant ways that urban gardens provide societal benefits: improving food security, building and sustaining communities, reducing obesity and providing urban ecosystem services. Sharolyn believes that it can be shown that green infrastructure in its various manifestations can mitigate some of the negative effects of climate change and improve both urban sustainability and human well-being.

Over the next five years Sharolyn's ambition is to develop a rich and spatially explicit representation of the urban ecosystem services of the City of Adelaide. The data set will serve as a standard of comparison for a myriad studies in urban ecology and urban metabolism by students and scholars from around the world. This dataset will help identify the policies and practices that make the most cost effective contributions to sustainability and human well-being in the Adelaide metropolitan region. This information will serve as a framework for a diverse assortment of citizen science projects run by the Barbara Hardy Institute.



Barbara Hardy
Institute

*Great Research
into Sustainability*

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CRICOS provider number 00121B

People

- Our researchers are scientists, engineers and social scientists
- We work collaboratively on real-world issues
- Over 100 researchers and 130 research students

Projects

- Multidisciplinary projects focused on sustainability
- We work in partnership with government, industry and academia
- Extensive testing and evaluation services and consultancy expertise
- Our work is underpinned by community participation and education

Research Abstract

Working closely with a PhD colleague Benjamin Tuttle on the geo-location of satellite data from Defense Meteorological Satellite Program's Operational Linescan System (DMSP OLS) data products, success has been achieved in estimating the error of the ground pixels in night-time light data.

The research has led to producing the first mobile calibration system for DMSP OLS data which involved designing, building, and transporting the "Magic Lamp" to areas that are known to be dark at night.

Research areas of interest

- Leveraging geographic information in citizen science initiatives
- Evaluating the social and economic benefits of urban gardening
- Documenting the economic value of green infrastructure and urban ecosystem services

Barbara Hardy Institute

Sharolyn's interdisciplinary research aligns with the values and approaches of the Barbara Hardy Institute. Her work on ecosystem services and spatio-temporal modelling of urban environments fits well with the research agenda of the Barbara Hardy Institute.

Keywords to describe Sharolyn's research

- Sustainability science
- Remote sensing
- Geo-technologies
- Night-time satellite imagery



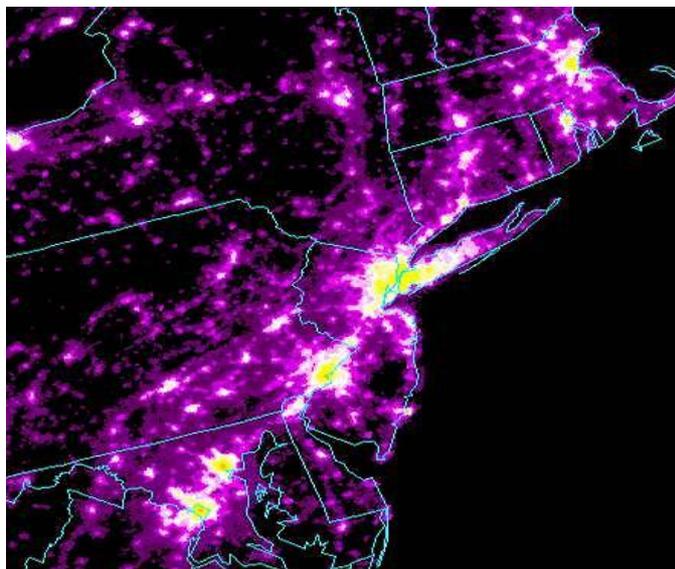
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