

RESEARCH DIRECTIONS

The ABC of golf, in an ecofriendly way

Associate Professor Sally Power, from the Hawkesbury Institute for the Environment, has been awarded funding to lead a team investigating the environmental value of golf courses within the local landscape. The project, which is supported by the Greater Sydney Local Land Services (GSLLS) through funding from the Australian Government, will assess levels of biodiversity and carbon sequestration.

‘Concern over the negative impacts of human activities on biodiversity has led to recent interest in the contribution of recreational areas such as parks, gardens and golf courses to urban biodiversity,’ says Associate Professor Power. ‘In urban and sub-urban settings, golf courses can represent a considerable proportion of green space, providing habitats for diverse flora and fauna and contributing to a wide range of ecosystem services.’

Golf courses vary considerably in size and structure – the average size is about 50 hectares. Although their carbon footprint is high because of the intense management required to maintain uniform playing areas on greens and fairways, golf courses represent large green spaces within a sub-urban environment. Non-native plantings and landscape fragmentation may reduce diversity from an area’s pristine native state, but golf courses can still benefit the wider landscape and provide vital ecosystem services. They contribute to air quality and climate regulation, and have significant potential to act as carbon sinks. In urban and agricultural settings, golf courses also contribute to valuable pollination services by providing habitat for native pollinators such as bees. Some courses may even sustain locally endangered or threatened species and act as habitat corridors.



Associate Professor Power’s project will assess the extent to which golf courses can act as biodiverse carbon stores within the greater Sydney region. This involves quantifying plant and animal life in different habitats within the golf courses in the context of climate and surrounding land use. It will also assess above- and below-ground carbon stores, and the impact of land management practices.

Biologically diverse ecosystems are known to be more resilient and better able to cope with environmental stress. However, there is a lack of data on the relationship between plant diversity and soil carbon in managed urban environments. This project will help fill that gap and make recommendations for promoting carbon storage and biodiversity on golf courses.

Project Title: Accounting for Biodiversity and Carbon in golf courses within the Hawkesbury-Nepean catchment area (ABC-golf)
Funding has been set at: \$224,918
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