



INSPIRING AUSTRALIA THROUGH CITIZEN SCIENCE

WHAT IS INSPIRING AUSTRALIA?

A strategy for national STEM engagement, aiming to deliver:

- A society that is inspired by and values scientific endeavour.
- A society that attracts increasing national and international interest in its science.
- A society that critically engages with key scientific issues; and
- A society that encourages young people to pursue scientific studies and careers.

Uses a 'National Framework – Local Action' approach

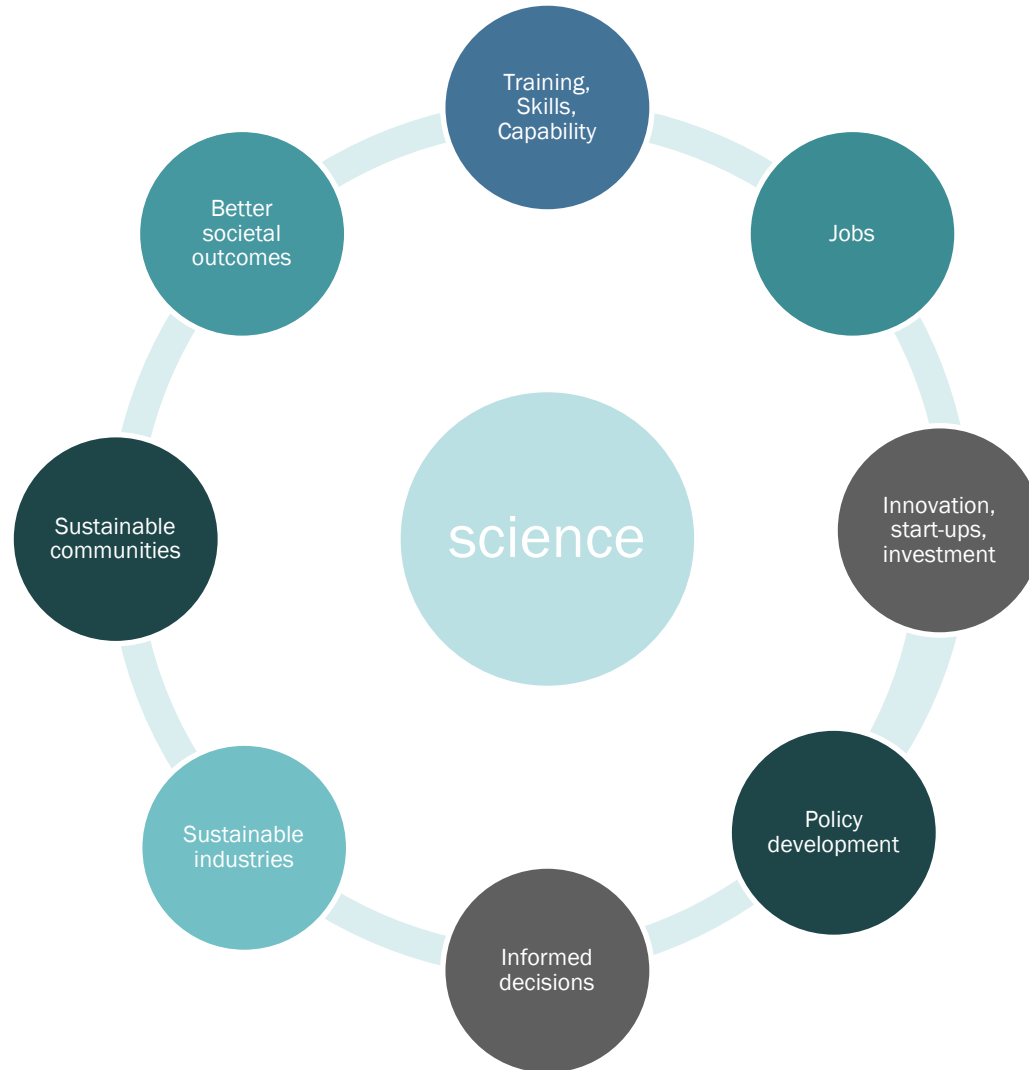
POLICY INTENT

...to provide leadership and national coordination of science communication and to maximise the government's efforts to engage the community in science through business and community support.

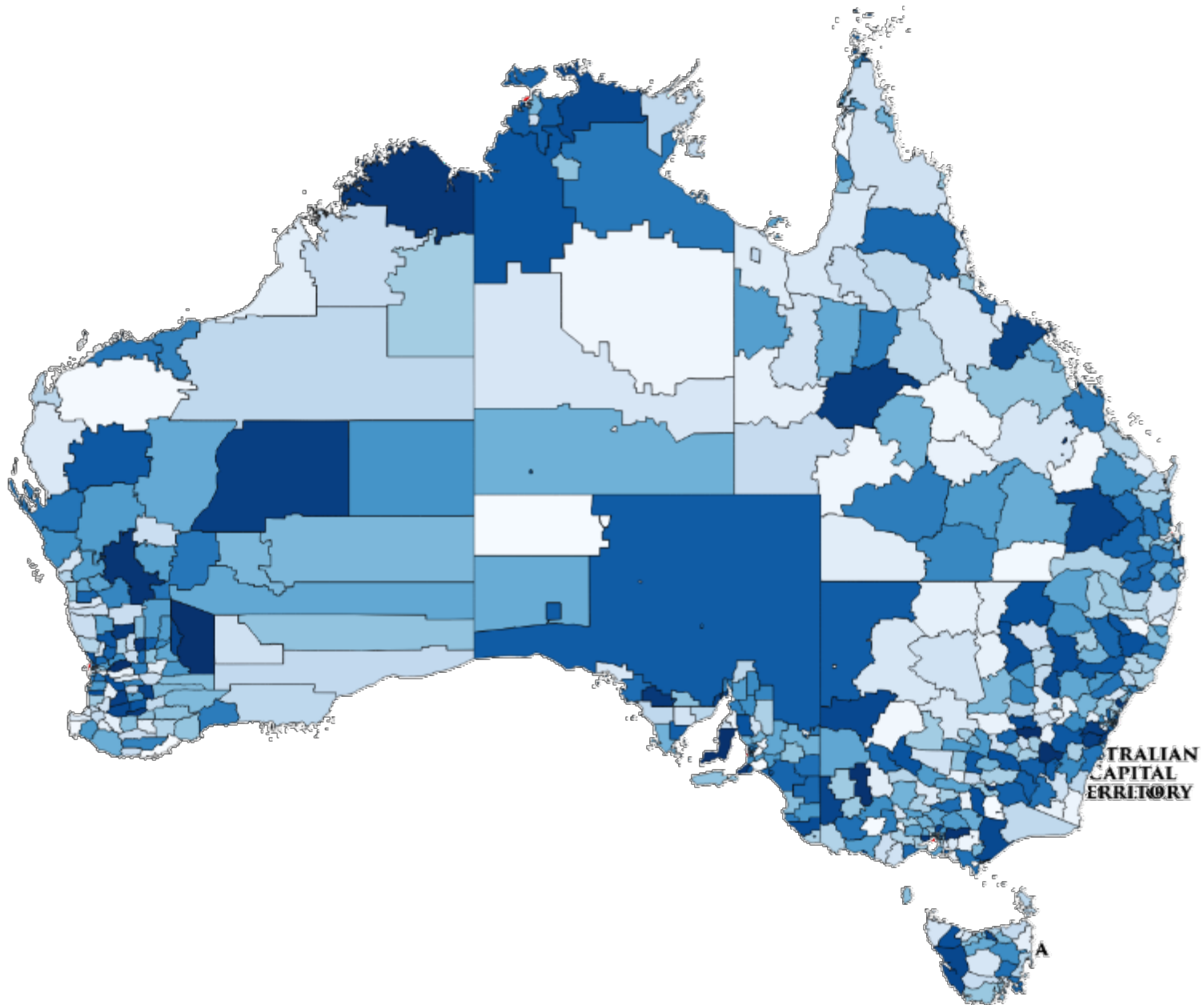
Prime Minister Julia Gillard and Minister Kim Carr

Policy statement on *Science For Australia's future*, 10 August 2010

STEM FOR ECONOMIC GROWTH



WORKING IN A FEDERATED SYSTEM



SUPPORTING STATE POLICY



Queensland Government



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Young Starters' Competition now open

Promoting entrepreneurship as an alternative career pathway for young Queenslanders. [More](#)



Explore the opportunities

Advance Queensland is investing in our future by harnessing innovation to strengthen and diversify the economy and create jobs.

STATE AND TERRITORY PARTNERSHIPS



NATIONAL FRAMEWORK – LOCAL ACTION





Volunteer
Effort



Growing
Interest



Mixed
Resourcing
Models

KEY
ELEMENTS



Multiple
Sectors



Local
Government
Commonwealth
State



Champions
of Engagement &
Communication



Inspiring
AUSTRALIA

NATIONAL HUB AT QUESTACON

National
Science Week
& other major
events

National
network &
targeted
science
communication
activities

STEM
partnerships,
strategy &
evaluation

POLICY, ACTIVITY, GRANTS

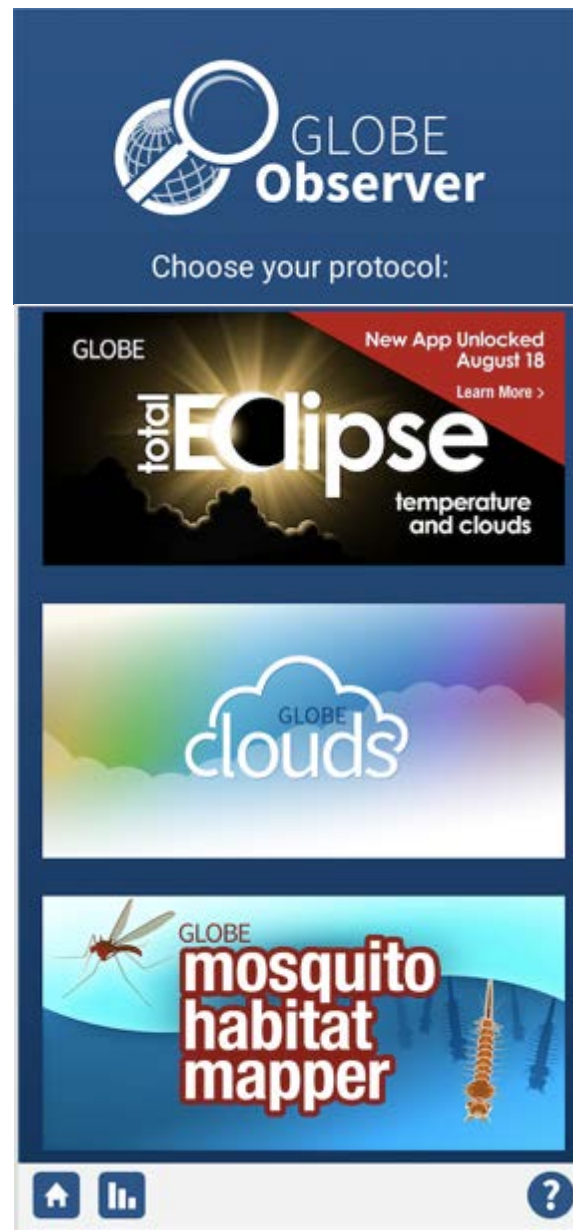
“Science is a profession,
but it is also a hobby.”

- Caren Cooper, TEDX

GLOBE Observer

NASA's platform for
citizen science
engagement in Earth
science research

Mosquito Habitat Mapper



MOSQUITO HABITAT MAPPER BLOG

Why Citizen Science, Why Now?

Our interest in mosquitoes specifically stems from their importance as vectors of human diseases. If we can improve our understanding of where we find a particular mosquito species, we will be able to better predict the risk of the pathogens that are carried by that mosquito species.

Mosquito sampling programs are expensive, requiring costly traps, people to set them out, and hours of time for sorting them and entering the data. Remote areas are often under-sampled, and the resulting data can sometimes be difficult for researchers to acquire.

Citizen science collections offer an exciting opportunity to fill in some of the surveillance and reporting gaps.



Dr. Sara Paull, Colorado School of Public Health, University of Colorado

PRINCIPLES OF CITIZEN SCIENCE

- Provide concrete benefits for participants
- Build on what's familiar
- Develop collaborative partnerships
- Be flexible and adaptive
- Offer genuine, equitable, and sustained personal contact with the community
- Uncover and address additional context-specific barriers
- *Pandya et al. (2013). Promising Practices for Community Partnerships: A Call to Support More Inclusive Approaches to Public Participation in Scientific Research. A Report Commissioned by the Association of Science-Technology Centers, Washington, D.C.*

4 STYLES OF CITIZEN SCIENCE PROJECT

- **Contributory:** people collect and contribute data and/or samples
 - **Collaborative:** people assist scientists in developing a study and collecting and analyzing data for shared research goals
 - **Co-created:** people define an issue and pursue a full research agenda with input from professional researchers as needed
 - **Citizen-led/ collegial:** people lead the research process with specialist inputs from professional researchers
-
- *Shirk, Ballard, et al., 2012.*
 - *Shroter and Bonn, 2017*

IGNITE YOUR IMAGINATION

 national science week

scienceweek.net.au #natsciwk

ANNUAL CITIZEN SCIENCE PROJECT

ABC WILDLIFE SPOTTER Classify Register About Science FAQ Win prizes Login



WILDLIFE SPOTTER

Help save threatened species and preserve Australia's iconic wildlife!

Become a citizen scientist and assist researchers by looking for animals in wilderness photos taken by automated cameras around Australia.

Anyone can join in and you can do it all online.

[Start Classifying](#)

2,660,539

images completed

3,306,172

animals identified

50,066

wildlife spotters

WIN

a camera





SPIDERS





Australian Government

OFFICE OF THE
CHIEF SCIENTIST

OCCASIONAL PAPER SERIES

ISSUE 11
July 2015

BUILDING AUSTRALIA THROUGH CITIZEN SCIENCE

*Gretta Pecl, Chris Gillies, Carla Sbrocchi and Philip Roetman**

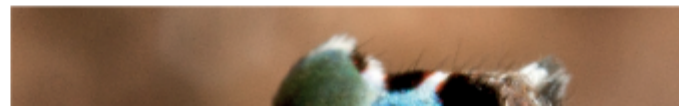
Partnerships between scientists and the community are strengthening Australia's research capacity, solving real world problems and enhancing our awareness of science.

BACKGROUND

Citizen science brings scientists and the wider community together to work on important scientific projects. It has played a central and celebrated role in the advancement of global knowledge.

From amateur astronomers tracking the transit of Venus in 1874 to the Audubon Society's 114 year-old Christmas Bird Count, people with a passion for science have worked alongside

Australian citizen scientists have discovered new species (Figure 1), played a role in breakthroughs on debilitating diseases⁴, identified and classified distant galaxies⁵, and contributed to new ecological theories.⁶





redmapo

SPOT. LOG. MAP.



© Sarah Williamson



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Circle**



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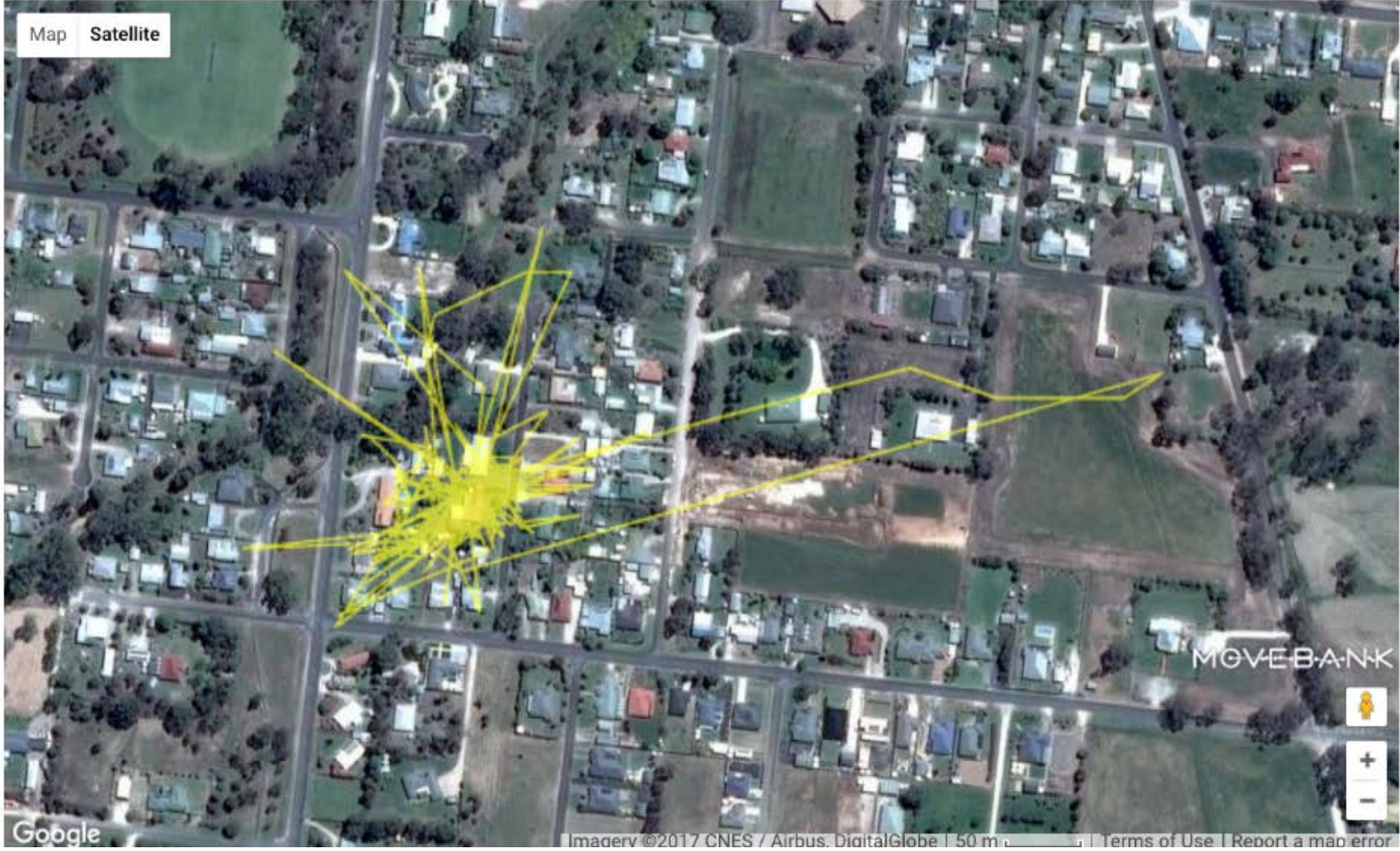
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Gizmo



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Zepher



Map Satellite

MOVE BANK

Google

Imagery ©2017 CNES / Airbus, DigitalGlobe | 50 m | Terms of Use | Report a map error

NATIONAL CONSULTATION PROCESS



IDEAS SYNTHESIS





**Australian
Citizen Science
Association**

NATIONAL CS PROJECT FINDER



Australian Citizen Science Project Finder

Sort by **Most recent** | Name | Relevance | Organisation | Projects per page **20**

Filter results

- Status

- Active
- Completed

- Tags

- Has Participation Cost (42)
- Has Teaching Materials (107)
- Is Contributing Data To Ais (103)
- Do It Yourself (DIY) (117)
- Participate At Home (158)
- Family/Child Friendly (145)
- Mobile (68)
- Free of Cost (490)

- Difficulty

- Easy (173)
- Hard (37)
- Medium (246)

+ Science Type

+ Countries

+ UN Regions

+ Source System

Geographic filter

[View all geographic filters](#)

Showing 1 to 20 of 535 projects.

1 2 3 4 5 6 7 >



DELWP GRANTS - NEST BOXES

Started 3 days ago
 Victorian Department of Environment, Land, Water...
 To monitor the contents of nest boxes
 Status: Project Ongoing
 Start date: 13 November, 2017



BIOBLITZ BATEAU BAY

Started today
 Rumbalara Environmental Education Centre
 Collect data on flora and fauna of Bateau Bay to increase community
 understand...
 Status: Project Ongoing
 Start date: 16 November, 2017



PLATYPUS CENSUS

Started 27 years ago
 Melbourne Water
 To monitor local platypus populations using water samples that are
 filtered...
 Status: Project Ongoing
 Start date: 01 October, 2015



ALAN ANDERSON WALK TRAIL KALAMUNDA - FLORA AND ...

Started 7.6 months ago
 Darling Range Branch of the WA Naturalists' Club
 To record the flora and fauna sightings on the Alan Anderson Walk Trail
 in Ka...
 Status: 410 days to go
 Start date: 01 April, 2017



WOMBeyan CAves BIOBLITZ

Started 13 days ago
 Great Eastern Ranges
 The Wombeyan Caves Stalite 2017 is free community event involving a

IMAGE:

Fireballs in the Sky, Curtin University



Winner of the Department of Industry, Innovation and Science Eureka Prize for Innovation in Citizen Science.



MINISTER ANNOUNCES GRANT ROUND



18 MAJOR PROJECTS FUNDED

| | | | |
|---|---|--|-----------|
| Royal Melbourne Institute of Technology | Scientists work with communities to improve urban microclimate | The number of extreme hot days is predicted to increase significantly over the next few decades in all Australian cities affecting communities with huge impacts on public health, mortality rates, energy demand and economy. Working with 12,200 citizens in 22 local councils across Australia, the project will design infrastructure to measure urban heat island, overheating, and local climate change, providing the data and information required for citizens to understand, mitigate and adapt to extreme heat; and inform policy makers on future health and energy needs and on effective planning of the urban built environment and open spaces. Importantly, through data collection and participation, citizens will be empowered to respond to extreme heat through an understanding of influential factors. | \$355,000 |
| Macquarie University | Cross-cultural biodiversity assessment in remote Aboriginal Australia | Macquarie University scientists will work with Aboriginal citizens of Arnhem Land to develop new tools for cross-cultural biodiversity assessment that can be applied across Australia. The biodiversity of remote areas is assumed to be threatened by invasive species and altered fire regimes; however, there is little documented data to inform management. Aboriginal citizens will trap, observe, identify and record flora and fauna using Western and Aboriginal science. Data will be recorded, analysed and communicated using cutting-edge digital techniques. This project is not just about citizens collecting data but being integrally involved in all stages of biodiversity research to empower community decision-making about remote land management. | \$256,060 |
| University of Western Australia | Using citizen scientists to test the effectiveness of biofertilizers | Researchers from University of Western Australia will engage with community members in southwestern Australia to test whether biofertilizers can improve carbon storage, water holding capacity and microbial activity of agricultural and horticultural soils. Participants will be taught the basics of experimental design, collect soil samples and will learn how to measure selected soil health parameters. Data collected will be statistically analyzed to test whether locally produced biofertilizers can be used to improve soil health. The results of the study will be shared with all participants and other interested parties at field days and digitally through webpages. The value and opportunities provided by citizen science will be highlighted. | \$190,425 |
| Museum Board | Mega Murray Darling Microbat | Scientists from the South Australian Museum and Department of Environment, Water and Natural Resources will engage with Landcare associations, landholders, and other interested community members in the lower Murray-Darling Basin to collect information on microbats. Much is still | \$189,950 |

What's that sound?

Croaks, whistles, bleats and barks - every frog species makes a different sound! By recording a frog call with our new app, FrogID, you can discover which frogs live around you and help us count Australia's frogs!

Get Involved

ANDROID APP ON
 Google Play

Available on the
 App Store





The real-world mobile game where you compete to save life on earth.

Free to play!

Start playing the world's first mobile game that takes you outdoors to discover and help preserve life on this planet. It's free. The sightings you report contribute to biodiversity research and conservation.



Empower your network to engage with life

Recruit your own 'clan' of bio-adventurers. Track the clan's progress, defeat other clans, create quests, host competitions, and get rewarded for the bio-expertise of your network.

Got wildlife expertise?

Start identifying sightings and QuestaGame will make a donation to the organisation of your choice based on the expertise you contribute. It's a great way to help players learn about wildlife while supporting a cause you believe in.

Become a Partner

By enrolling as a partner, your community can choose to contribute wildlife expertise on your behalf - which raises funds for your organisation. Every time a member of your community helps verify a sighting on QuestaGame, your organisation earns a donation.

ACSA Conference

[Highlights](#) | [Important dates](#) | [Draft schedule](#) | [Sponsorship](#)



When:

7 – 9 February 2018

Optional weekend activities available

Where:

City West Campus, **UniSA**,

47 – 55 North Terrace, Adelaide, South Australia

@UniSACityWest

The Australian Citizen Science Association invites you to join us in Adelaide from February 7-9, 2018 as we bring together citizen science practitioners, participants, thought leaders and decision makers for the Australian Citizen Science Conference

Many thanks to our local partners & current sponsors

LOCAL PARTNERS



University of
South Australia

GOLD LEVEL SPONSORS



Government of South Australia

Department of Environment,
Water and Natural Resources



An Australian Government Initiative



Office of

LESSONS LEARNED

Do:

- Harness the energy
- Be a locus for conversation, participation, promotion, development, reflection
- Collaborate; be powered by partnerships
- Evolve to meet the need

Don't:

- Underestimate the appetite



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