## Platforms EOI: EcoCommons

5 September 2019 at 16:14

### Project title

EcoCommons

### Field of Research code(s)

- 04 EARTH SCIENCES
- 05 ENVIRONMENTAL SCIENCES
- 06 BIOLOGICAL SCIENCES
- 07 AGRICULTURAL AND VETERINARY SCIENCES
- 08 INFORMATION AND COMPUTING SCIENCES
- 12 BUILT ENVIRONMENT AND DESIGN

### EOI Lead Name

Nigel Ward

### EOI lead Organisation

Queensland Cyber Infrastructure Foundation (QCIF)

### EOI lead Email


### Collaborator details

<table>
<thead>
<tr>
<th>Name</th>
<th>Research Group</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah Richmond</td>
<td>ecocloud Program, eResearch Services</td>
<td>Griffith University</td>
</tr>
<tr>
<td>Helen Thompson</td>
<td>AgReFed</td>
<td>Federation University</td>
</tr>
<tr>
<td>Kheeran Dharmawardena</td>
<td></td>
<td>Cytrax Consulting</td>
</tr>
<tr>
<td>Dr. David Lemon</td>
<td>Land and Water</td>
<td>CSIRO</td>
</tr>
<tr>
<td>Prof. Gordon Blair</td>
<td>Data Science for the Natural Environment</td>
<td>Lancaster University, UK</td>
</tr>
<tr>
<td>Mike Brown</td>
<td>Data Labs Initiative</td>
<td>UK Research and Innovation Natural Environment Research Council (NERC)</td>
</tr>
<tr>
<td>Dr. Lucy Bastin</td>
<td>Engineering and Applied Science</td>
<td>Aston University, UK and Joint the Research Centre, European Commission</td>
</tr>
<tr>
<td>Pasquale Pagano</td>
<td></td>
<td>D4Science, ISTI-CNR, Italy</td>
</tr>
<tr>
<td>Prof. Brendan Mackey</td>
<td>Griffith Climate Change Response Program</td>
<td>Griffith University</td>
</tr>
</tbody>
</table>
Project description

The Eco-Commons will provide an enhanced computing and analytical capability for earth and environmental researchers. The project will administer a shared, stable and regulated commons providing a springboard for collaboration between scientists across a range of domains. We will achieve this through managed platforms and multi-tenant microservices, enabling data-intensive analytics with on-demand elasticity independent of application and users.

We aim to (1) provide a service-based framework (based on internationally accepted standards) for deploying, orchestrating and re-using science-centric services; and (2) work with researchers to implement scientific analytical workflows using those services. One of the objectives of this project is to re-engineer existing ecoinformatics solutions, such as those available through the 5-year old BCCVL application, allowing their broader reuse and adoption alongside workflows for new communities (e.g. environmental science, biosecurity, agriculture, hydrology).

Existing technology

Adopt

This project will adopt the existing ecocloud Platform infrastructure to re-engineer the workflows implemented in the BCCVL. This will enable new opportunities for collaboration between diverse communities that utilise similar workflows. For example, BCCVL already serves as the baseline for a developing platform (CSDM) that translates biodiversity modelling research into environmental management and decision making for state and federal government departments. This project will accelerate the translation of additional research workflows into policy.

Adapt

This project will adapt existing code packages into reusable microservices to provide research and decision-making impact across a number of sectors (e.g. environment, biosecurity, agriculture, hydrology). Additionally, existing microservices will be exchanged between the project and international initiatives such as the UK-based Data Labs and Ensemble projects as well as initiatives in the European D4Science group to ensure interoperability between international cloud-technology platforms in the environment space.

Build

This project does not propose to build new platform technology.

Anticipated requirements

Annual funding

$400,000 - $499,000

Proposed length

2 years

Other information

Other information you wish to provide

The project partners believe the platforms proposed as part of the project to be key foundational components to offer managed environmental analytics across research and government jurisdictions. This project aligns with the
draft system design from the Scoping Study of the National Environmental Prediction System and consultation will continue between the projects, as well as other long-term strategies, to ensure national alignment.

The project will also put the ecocloud platform and related workflows on a path to long term sustainability through the delivery of a more manageable codebase.

**Terms**

**I agree to the terms**

Yes