

NCMAS Application Form Outline

2020 Call for Applications

NCMAS Secretariat

Revision: 27 August 2019

This document provides a brief overview of the information required in an NCMAS application. It is intended to help you prepare your application in advance.

This document is not an NCMAS application form. NCMAS applications must be submitted through the NCI and NCMAS websites as described below.

Applying to NCMAS is a multi-step process:

1. Update your personal details and project personnel at <https://my.nci.org.au>.
2. New projects only -- Submit a project proposal via <https://my.nci.org.au> to register a new project for NCMAS. Note that this initial proposal is an abstract for registration purposes only. You must also complete the full application per step 3 below.
3. Complete the full NCMAS application at <https://ncmas.nci.org.au>

New for NCMAS 2020:

1. The NCI NCMAS compute share will increase from 115 MSU/year to at least 200 MSU/year (Raijin equivalent SU). The final NCI share will be finalised by NCI Board in 2019 Q4.
2. NCI allocations will be installed on the new NCI compute system **Gadi** from 1 January 2020. Raijin will be decommissioned in 2019 Q4.
3. From mid-August 2019 applicants can use ORCID via <https://my.nci.org.au> (researcher profile) to manage their publications for an NCMAS application. The new ORCID functionality is currently undergoing pre-production testing. The Secretariat will provide instructions for using ORCID via <https://my.nci.org.au> in supporting documentation on the NCMAS web site.

Application Form Outline

This section lists the items on the NCMAS 2020 application form and provides a preview of what you will see when you are writing your application. The online form can be found at <https://ncmas.nci.org.au>. Note that an NCI userid is needed to log in and access the form. If you do not have an NCI userid please register at <https://my.nci.org.au>.

Project Code

(type-in)

Nominate a project code for NCMAS consideration.

Application Category

(select one)

- Open
- Early Career Researcher

- Special Consideration

Australian Strategic Research Priorities

(select all that apply)

- Food
- Soil and Water
- Transport
- Cybersecurity
- Energy
- Resources
- Advanced Manufacturing
- Environmental Change
- Health

Research Proposal

(text type-in or PDF upload)

Describe the research to be supported.

1. Provide sufficient background to clearly define the goals of the project.
2. Emphasise the significance, impact and innovation of the research.
3. Describe the significance and impact in the scientific domain.
4. Describe the significance and impact on society and industry partners (if applicable).
5. The length and rigour of the proposal should reflect the level of resourcing requested.
6. Be specific and concise. Avoid broad general statements, such as “This research is significant to Australia”.

Compute Request (KSU)	Proposal Length (words)
Greater than 4000	3000
1000 – 4000	2000
250 - 1000	1000

[The proposal can be provided via the WYSIWYG text type-in on the form or as a PDF upload (one file). A PDF will give you more control over formatting and presentation, including any tables, illustrations or graphs.]

Prior HPC Experience

(text type-in)

If you have not previously submitted an application to NCMAS, describe your previous experience with HPC, including (1) a general overview of your experience, (2) systems used, and (3) application codes, algorithms and workflows.

Facilities

(select all applicable)

Select the facility or facilities which can support your research workflows.

- NCI: (System name to be confirmed)
- Pawsey: Magnus (Cray)

- MASSIVE
- UQ/RCC: FlashLite

Early Career Researcher or Special Consideration

(optional, select one only if applicable)

Applicants for Early Career Researcher or Special Consideration categories should nominate the category of choice.

- ECR
- SC

Compute Request

(type-in text)

- NCI (enter KSU amount)
- Pawsey (enter KSU amount)
- MASSIVE (enter KSU amount)
- FlashLite (enter KSU amount)

There is no formal upper bound on NCMAS compute requests, however, strong demand for NCMAS resources will limit the largest allocations to a maximum of ~10-15% of the resource share at each facility. Applications which request more than 5 MSU are expected to be of an exemplary standard.

Supporting Comments

(optional, type-in)

Provide additional comments in support of your compute resource request.

Software

(type-in)

List any commercial or open source software packages that are essential to your project. If the software to be used requires a license, indicate whether you (the applicant) are licensed to use the software at each facility nominated.

Computational Details

(type-ins or PDF upload)

Provide details on:

- Scalability on each nominated facility: For software with multi-node capability, scalability tables and plots should present data relative to single node performance, not single core performance.
- Compute job resources at each nominated facility. Provide details on typical job configurations for your workflows, including expected wall times, number of nodes/cores, data dependencies, expected throughput, and so on.
- Storage: Describe data storage requirements and data life cycle for your project.
- Algorithms and Workflows: Describe parallelism in your application(s) and how this relates to mathematical algorithms used. Describe data movement and lifecycle.

- Provide a clear justification for use of supercomputer resources. This justification might elaborate on, for example, a requirement for large scale parallel jobs, high throughput workflows, or data-intensive workflows using large data sets.
- If previous resource usage at a facility has had low efficiencies, explain why, and describe your strategies to improve efficiency. (One example of inefficiency is an application with a large memory per core requirement. This can lead to underuse of reserved cpus.)

[Computational details can be provided via type-in boxes on the form or as a PDF upload (one file). A PDF will give you more control over formatting and presentation, including any tables, illustrations or graphs.]

Usage of Previous Allocations

(type-in)

If usage of your current NCMAS allocation (2019) is less than 80% of your total allocation pro-rata at Q3, provide an explanation for this underutilisation of your grant.

Increased Request

(type-in)

If your resource request for 2020 is larger than your current allocation or is significantly larger than your request in the previous NCMAS call, provide a detailed justification for the increased request.

Other Requirements

(type-in)

Use this item to provide information about other requirements or dependencies not mentioned in previous parts of this application.

Research Funding Support

(type-in fields; ARC and NHMRC grant IDs)

List research funding support received during the previous five (5) years, from 2014 to the present. If you are awarded an applicable research grant after the NCMAS application deadline (20 Sep 2019) please contact ncmas@nci.org.au to submit an addendum to your application with grant details.

Important: Each grant nominated in the application MUST have at least one project CI (Lead CI or regular CI) named as a recipient. Inclusion of grants which are not attributable to a Lead CI or regular CI on the project is a breach of NCMAS application rules.

If you wish to include a grant from a collaborator who is not a member of your project the recommended action is:

1. Ask the grant holder for permission to nominate the grant in your NCMAS application.
2. Ask the grant holder to join your project as a (regular) CI.

3. The Lead CI should approve the grant holder's request to join the project.

If you add a CI to your project in this scenario, take extra care to ensure the new CI is not a Lead CI or regular CI on another NCMAS application.

Progress Report

(type-in or PDF upload)

Provide a report on developments and progress for your project during the 2019 calendar year to date. Describe how NCMAS resources support notable research outcomes.

Information provided in this progress report may be used for public release, for example, for reporting to government or informational purposes.

Progress Report – Confidential

(optional, type-in)

Provide updates or feedback which you would like held in confidence by the NCMAS Committee, Facilities and the Secretariat.

Peer-Reviewed Publications 2014-2019

(type-in)

List peer-reviewed publications from the previous five (5) years which are relevant to this application. Identify all publications supported by NCMAS allocations using the prefix “[NCMAS-PUB]”.

For returning applicants this item will be auto-populated with the information provided in your previous application.

Conference Papers and Presentations 2014-2019

(type-in)

Provide conference papers and presentations relevant to this application.

Other Publications 2014-2019

(type-in)

List other publications relevant to this application.