NCMAS 2021 - Application Form Outline

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 MyNCI - https://my.nci.org.au.
2. For **new** projects:
    a. Use the *Create a new project* button under My Application at https://ncmas.nci.org.au to propose the new project you want to apply to NCMAS for. Note that this initial proposal is an abstract for registration purposes only.
    b. You must also complete the full application per step 3.
3. For **all** projects: Complete and submit the full NCMAS application under My Application at https://ncmas.nci.org.au.

New for NCMAS 2021 Call for Applications:

- Applicants must write their Proposal and Computational Details in anonymous third-person style to be compliant
    o These must be submitted as a single PDF file
- Minimum requests have changed
    o Associated changes have been made to word counts for applications
    o These minimums are also the amounts for the ECR and Special Consideration categories

Facility-System	Minimum Allocation (KSU/year)
NCI-Gadi	500
Pawsey-Magnus	250
MASSIVE	50
UQ-FlashLite	20

- ORCID iD use is now mandatory
- Submission is final – there is no option to 'unsubmit' and edit an application
    o Addenda allowed if needed to address updates/corrections

How to Apply

This section lists the items on the NCMAS 2021 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 Username is needed to log in and access the form.

If you do not have an NCI Username please register at https://my.nci.org.au.

Creating a New Project

If you do not already have a project saved in the MyNCI system, or if you wish to apply to NCMAS with a new project, you will need to create a new project before you can complete the NCMAS application.

Use the '*Create a new project'* button in My Application to start this process.

Project Overview

Fill in a descriptive title for your proposed project and provide a short abstract summary of what the project aims to achieve. This summary text is used in MyNCI to describe your project, it is not considered as part of any NCMAS application.

Research Classification

You are required to provide the research classification codes that apply to your project. These codes are used for allocating applications to appropriate NCMAS assessors.

Enter your ANZSRC Fields of Research and ANZSRC Socio-Economic Objective codes by typing in the code numbers or title words and selecting from the list presented.

If you select more than one Research Classification, the next page will prompt you to assign percentage weights to reflect each Classification's relevance to the project.

Investigators

It is important to name all chief investigators who will be contributing to the project. You will have the opportunity to edit this list of Investigators later in the NCMAS application process.

Search for existing NCI users by last name, email address or user name. New users who will be Chief Investigators on your project will need to register at https://my.nci.org.au before you can add them.

Terms and Conditions of Use

You will need to agree to the Terms and Conditions of Use for using NCI infrastructure and services, such as the MyNCI and NCMAS Application Form portals. Please read this carefully, in particular the detail around the Defence Trade Controls Act at the bottom of the page.

Select the appropriate check box, then click '*Create Project'*.

My Application

From this My Application page, you can see your proposed project listed. Note that **this does not constitute an NCMAS application.**

Click the *'Start Application'* button in the Action column next to your project name to begin. The first stage you will see is Getting Started.

After you begin your application, you will be able to return to your saved application by going to the 'My Application' tab and clicking *'Continue application'*.

Click *'Request a compliance check'* to go to the Anonymous Third-Person Compliance Check - available up to 12 Oct 2020.

In accordance with NCMAS 2021 rules, an applicant may be a Chief Investigator (CI) on only one application per round and is allowed to have one draft application in progress. To be the CI on another application or apply for a different project you must delete this application or withdraw from the CI role.

Click 'Delete application' to delete your application.

Navigating the Form

Use the 'Save and Next' button at the bottom of the screen to move through the application.

Corrections can also be made by returning to previous steps via the round buttons in the progress bar at the top.

Anonymous Third-Person Compliance Check

Request a check of your application's compliance with the anonymous third-person writing style by uploading a draft of your *Proposal* and *Computational Details* document. You will receive back an annotated copy of your draft with feedback and advice on achieving compliance within one week.

You can request **one compliance check per application** up to **12 Oct 2020**.

Please ensure you have applied the anonymous third-person writing style to the best of your ability before submitting it for a compliance check.

'Choose File' to upload a document for review by the Secretariat. You can choose to provide Additional Information.

You will receive email confirmation of your submission to the optional compliance check.

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Getting Started

Before starting this NCMAS application it is important to make sure your user profile, and the profiles of your project's Chief Investigators, are up to date in MyNCI. Some information stored in the Chief Investigator profiles will be used in your NCMAS application and assessment so it is important to have up to date information.

Checklist:
1. Update your email address, mobile phone number, institution and position, career profile, and publications.
2. Ask your Chief Investigators to update their email addresses, contact details, career profiles and publications.

If you have questions regarding how to manage your user profile or eligibility please contact the NCMAS Secretariat for advice — ncmas@nci.org.au.

The application deadline for the NCMAS 2021 call is 5pm AEDT 26 October 2020. Unfortunately, late applications cannot be accepted.

Declaration of Eligibility	**(check box)**
The Lead CI is based in Australia, holds a substantive (paid) position at an Australian higher education institution or research institute eligible for ARC and/or NHMRC funding, or an Australian publicly funded research agency, e.g. CSIRO, Bureau of Meteorology, Geoscience Australia, ANSTO, etc.	

Investigators

While the Chief Investigators may be changed any time before the application is submitted, it is better to confirm them early to avoid last minute complications with breaches of the one-application-per-CI rule.
The current Chief Investigators for the project are:

Manage memberships	**(click 'Manage memberships')**
This opens a new tab of My NCI, allowing you to modify your project membership.	
Refresh to make membership changes visible.	**(click 'Refresh')**
You can click on the 'Role' of a member in their row to directly modify their role or remove them from the project.	

Number of Active Users

The total number of active people in the research group, to help assess the capacity of the group to use the requested resources.
Examples of group members considered inactive:
- members no longer using resources but with papers under review
- members no longer working on the project but with potential for future collaboration.

Number of Active Users	**(type a number)**

Category

Select the category to apply in. Please ensure that you have read the application instructions and eligibility criteria for each category in the NCMAS 2021 Information for Applicants.

Application Category	**(select one)**
	Open/Special Consideration/ECR

Open
Resource requests are not restricted. Applicants are expected to demonstrate successful utilisation of national HPC facilities at scale and have a track record of research outcomes and independent funding.

Special Consideration
A limited number of special allocations are available to applicants who may otherwise not be competitive in the NCMAS. For example, an individual who has returned to a research role following a significant career interruption.

The Special Consideration allocation is the minimum allocation of the requested facility.

Special Consideration requests must only be made on <u>one</u> HPC facility.

Facility-System	**Minimum Allocation (kSU/year)**
NCI-Gadi	500
Pawsey-Magnus	250
MASSIVE	50
UQ-Flashlite	20

Explain why your application requires special consideration	**(type text)**

Early Career Researcher (ECR)
The ECR category provides an opportunity for researchers who have been awarded a PhD within the last five (5) years (relative to opportunity). Early Career Researcher applications are highly competitive. Applicants are expected to demonstrate a record of independent research funding, such as an ARC DECRA, NHMRC CDA, or similar award.

The ECR allocation is the minimum allocation of the requested facility.

ECR requests must only be made on <u>one</u> HPC facility.

Facility-System	**Minimum Allocation (kSU/year)**
NCI-Gadi	500
Pawsey-Magnus	250
MASSIVE	50
UQ-Flashlite	20

Research & Computation

Upload a PDF that details the proposed research, its significance, innovation and impact; and the compute jobs that will be run.

This document must follow the anonymous third-person (A3P) writing style.

Browse	(upload ONE PDF file)
PDF files must • be less than 5 MB in size • have a filename of 50 characters or less • contain both <u>Proposal</u> AND <u>Computational Details</u>	

Anonymous Third-Person Writing Style
Do not include author names or affiliations anywhere in the <u>Proposal</u> or <u>Computational Details</u>.
   • This includes but is not limited to, page headers, footers, diagrams, titles, figures, or watermarks.
Referencing is an essential part of demonstrating knowledge of the field and progress.
When citing references within the proposal, use third person neutral wording.
   • **This especially applies to self-referencing**.
   • For example, replace phrases like:
      "as we have shown in our previous work (Doe et al. 2010)"
      with
      "as Doe et al. (2010) showed..."
   • Do not refer to previous projects using NCI/Pawsey/MASSIVE/Flashlite or other HPC/D resources in an identifying fashion.
      o For instance, rather than write
         "We utilised 5 MSU on Gadi to determine under NCI project XXXX,"
         instead write
         "Previous research has determined"
Do not include acknowledgements, or the source of any grant funding in the proposal document itself.

Research Proposal
The research <u>Proposal</u> should 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".
Please refer to the *NCMAS 2021 Information for Applicants* for the expected proposal length.

Computational Details
Provide the following <u>Computational Details</u>:
1. 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.
2. 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.
3. Storage: describe data storage requirements and data life cycle for your project.
4. Algorithms and Workflows: describe parallelism in your application(s) and how this relates to mathematical algorithms used; describe data movement and lifecycle.
5. Provide 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.)

HPC Experience

If you did not receive an NCMAS grant for 2020, describe your previous experience with HPC, including:
1. a general overview of your experience,
2. systems used, and
3. application codes, algorithms and workflows

Experience with a NCMAS 2020 grant will be captured later in the application.

A3P Writing Style is not required.

Describe previous HPC Experience	**(type text)**

Resources

HPC allocations are provided in "service units" (SU) which reflect a normalised view of computing time used, priority of execution, and hardware capabilities. The baseline definition of a service unit is usage of one processor for one hour of elapsed time, at the nominal standard priority on a given system. Note that resource requests for NCMAS are quantised to kSU, that is, 1 kSU = 1000 SU.

Available compute systems		
System	**Total Time**	**Min Request**
Gadi	250,000 kSU	500 kSU
Magnus	100,000 kSU	250 kSU
MASSIVE	2,500 kSU	50 kSU
FlashLite	1,930 kSU	20 kSU

NCMAS allocations are awarded for a calendar year and provided by the facilities in equal quarterly instalments on their target HPC systems. Non-uniform installation of an NCMAS allocation across a calendar year may be negotiated with a facility. The unused component of a quarterly allocation will not be rolled over to following quarters. NCMAS facilities are generally not able to accommodate requests for supplemental allocations due to oversubscription of resources.

Please ensure that you have read the application instructions, eligibility criteria, and the lower and upper bound of the resource requests for each category in the *NCMAS 2021 Information for Applicants*.

Requested System	**(select system from list)** FlashLite/Gadi/Magnus/MASSIVE
Requested resource amount (kSU/year)	**(type a number)**
Add more rows *(if requesting more than one system)*	**(click 'Add')**

Justification for Requested Amount

Provide a detailed justification for the resources request, including an explanation for any increase compared to your current NCMAS allocation or previous request.

Provide justification	**(type text)**

Utilisation of Current Allocation: (optional)

If you currently have a compute grant, NCMAS or otherwise, assess how well you have utilised the grant, discussing any impediments, including natural disasters and pandemics, that have prevented you from fully consuming the grant.

Discuss underutilisation	**(type text)**

Software

List any software packages that are essential to your project and indicate what licence you intend to use it under.

Name & Version	**(type text)**
Vendor	**(type text)**
What licence do you plan to use?	**(select option from list)** My own/My institution's/ The facility's/Open source licence
Add more rows *(if more than one software package)*	**(click 'Add')**

Funding

List grants awarded from 2015 calendar year to date.

If you are awarded an applicable research grant after the submission deadline the NCMAS Secretariat can help you add the grant to the application via an addendum.

Important: A grant may be listed if at least one CI is named on the grant. Inclusion of grants which are not attributable to a CI is a breach of NCMAS rules.

Grant categories are defined in the [Higher Education Research Data Collection](#) specifications.

Funding Body	**(select option from list)** ARC/NHMRC/Other
Grant ID	**(type text)** 50 characters max.
Category	**(select option from list)** Category 1/Category 2/Other
Add more rows *(if listing more than one grant)*	**(click 'Add')**

Additional Funding

Any further information about how your project will be funded. If the project is not currently supported by grants, describe any other financial support the project has.

Describe other financial support	**(type text)**

NCMAS 2021 - Application Form Outline

Progress

If your project is currently supported by an NCMAS grant, describe research highlights and notable outcomes for your project in the calendar year (2020) to date in the Progress Report. These may be cited, with your consent, to promote the scheme.

The effectiveness of the usage of any NCMAS resources previously provided may be assessed through the productivity and outcomes generated by previous allocations. This might include papers in high-impact journals, patents or other outcomes of impact and/or national benefit.

If you are successful in your NCMAS 2021 application, you will be required to submit a Progress Report in Quarter 1 of 2022.

Research Highlights (optional)

Highlights and notable outcomes for your project in the calendar year to date. A3P Writing Style is not required.

Describe highlights and outcomes	(type text)

Publication Highlights (optional)

List any publications from 2018 to date that you would like to highlight. Order is not important here — publications will ordered chronologically after saving.

Published state	(select option from list) Published/Accepted for publication
Work type	(select option from list) Journal article/Conference Paper/ Book/Edited Book/Book Chapter
Title	(type text)
Published year	(type a number) YYYY
Published month (optional)	(select option from list) Jan/Feb/Mar/Apr/May/Jun/ Jul/Aug/Sep/Oct/Nov/Dec
Publication title *Title of the publication the work was published in, the publisher in the case of books, or the name of the conference.*	(type text)
Authors *Up to 6 authors, e.g. "Harry Potter, Hermione Grainger, Ron Weasley, ... Albus Dumbledore"*	(type text)
DOI (optional)	(type text)
Publication was supported by NCMAS grant?	(select option from list) Yes/No
Add more rows *(if listing more than one publication)*	(click 'Add')

WISA Consent

WISA National Trial of Anonymising Research Funding Proposals Consent

In 2021, the NCMAS is taking part in the Women in STEM Ambassador [National Trial of Anonymising Research Funding Proposals](). The trial's aim is to assess whether the anonymised review of proposals reduces unconscious bias in STEM grant programs.

A3P style is mandatory for compliance. Your consent is sought regarding the use of your anonymised data in the UNSW/WISA study.

Anonymised data about you and your grant outcome will be provided to the trial at the conclusion of NCMAS 2021 only if you provide consent below. You may change your mind any time before grant decisions have been finalised.

Please read the following participant information statement carefully.

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM	**(scroll to read)**
Confirm whether you consent to participate	**(select option)** I agree to participate/ I DO NOT agree to participate
I would like the study results emailed to the Lead CI	**(check box)**

Preview

Final Review and Submissions

Review your application. Corrections can be made by returning to previous steps via the round buttons in the progress bar at the top.

Please note:
- Application submission is final.
- Changes to CIs' career and publication record in MyNCI after submission will not be reflected in the application.
- Changes or corrections can be made by supplying addenda. Refer to the *NCMAS 2021 Information for Applicants* for instructions.

I understand and want to submit	**(check box)**
Submit Application	**(click 'Submit Application')**

Confirmation

The Lead CI and all listed CIs will receive a confirmation email with a link to the application summary.