



Australian Government

**Community
Grants Hub**
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Soil Science Challenge

General feedback for applicants

Summary

The grant opportunity application period opened on 24 November 2021 and closed on 14 February 2022.

The grant opportunity received 113 applications, of which 107 were eligible. Following the Decision Maker's decision, 11 applications were selected for funding, to a value of \$19,666,818.29 (GST excluded).

There was a strong interest in the program and successful applications were of a very high standard. Applications were assessed according to the procedure detailed in the Grant Opportunity Guidelines and outlined in the Selection Process below.

This feedback is provided to assist grant applicants to understand what generally comprised a strong application and the content of quality responses to the assessment criteria for this grant opportunity.

Program overview

National Soil Strategy and National Soil Package

Released in May 2021, the National Soil Strategy (the strategy) sets out how Australia will value, manage and improve its soil for the next 20 years. The strategy prioritises soil health, empowers soil innovation and stewards, and strengthens soil knowledge and capability. The strategy will support Australia's domestic and international commitments towards a more sustainable future, such as the Australian agriculture industry's Ag2030 goal, and the Australian Government's priority of building resilience in our communities and adapting to a changing climate.

Work is already underway to realise the vision of the strategy to ensure Australia's soil resources are recognised and valued as a key national asset. The Australian Government has committed to a \$214.9 million National Soil Package to implement the strategy. This includes \$20 million over 4 years for the Soil Science Challenge Grants Program to support researchers to address fundamental gaps in soil science and improve our understanding of how to better manage soil.

More information on the National Soil Strategy and the National Soil Package can be found on the Department of Agriculture, Water and the Environment [website](#).

Soil Science Challenge

The Australian Government recognises healthy soils improve resilience to climate change and natural disasters, contribute to our emission reduction targets, help grow our agriculture industry and secure human health, food and water security, biodiversity and economic growth. Soil provides essential ecosystem services which support food and fibre production, water storage, filtration and nutrient cycling and carbon storage.

Innovation in the way we manage our soil and advances in soil science and technology will be essential if we are to meet the Ag2030 goal of growing the agriculture sector to \$100 billion by 2030 while sustaining the environment.

To better support individual and national-scale decision-making we need to understand more – through better robust, well researched and peer-reviewed science – about how different management practices impact different soil types, soil organic carbon levels, productivity and environmental sustainability.

The Soil Science Challenge (the program) is a competitive grant opportunity aimed at research organisations.

The objectives of the program are:

- to support research to address priority gaps in the current soil-related science knowledge base; those findings are to be provided for peer review and should be prepared in a manner suitable for publishing
- to support research which contributes to the knowledge base necessary to achieve the goals of the National Soil Strategy
- to provide Australia, including industry, farmers and other land managers, with new and improved soil science to influence soil health, leading to improved productivity, profitability, resilience and to assist in mitigating climate change.

The outcomes of the program are:

- Completion of new research projects which add to Australia's soil health knowledge and address one of the following research priorities:
 - soil carbon dynamics
 - soil hydrology
 - soil biology and nutrients
 - soil/root interface.



Selection Process

Projects were selected through an open competitive process.

All applications which passed the initial compliance and eligibility checks progressed to a preliminary assessment against the assessment criteria by the Department of Agriculture, Water and the Environment (DAWE).

Applications were assessed on merit, based on:

- how well it met the assessment criteria
- how it compared to other applications
- whether it provided value with relevant money.

The preliminary assessment provided an initial ranking of applications to inform the deliberations of the Selection Advisory Panel (SAP). The SAP was comprised of a Chair and three soil specialists determined by DAWE. They reviewed the applications, making final recommendations based on the strength of their responses to the assessment criterion and their demonstrated ability to meet the grant requirements outlined in the Grant Opportunity Guidelines.

Final approval of projects was made by the Minister for Agriculture and Water Resources, the Hon. David Littleproud MP.

Selection Results

11 organisations were selected to deliver the Soil Science Challenge grant.

The selected organisations provided strong responses to the assessment criteria and demonstrated their ability to meet the eligibility requirements outlined in the Grant Opportunity Guidelines. Further detail about what constituted a strong response to each criterion is provided below.

Criterion 1: Researcher(s)/Capability

Describe:

- Research Opportunity and Performance Evidence (ROPE), including completion of the application Project Plan template
- time and capacity to undertake the research
- evidence of experience in research training, mentoring and supervision (where appropriate)
- the capability of the researcher or team to build collaborations both within Australia and internationally (where appropriate).

Strength	Example
Strong applications clearly demonstrated Research Opportunity and Performance Evidence (ROPE), including completion of the application Project Plan template.	Strong responses clearly described: <ul style="list-style-type: none">▪ applicant research quality and contributions to the research field▪ the project was consistent with the expertise available in the applicant's organisation▪ the extent the research could build on the applicant's existing work▪ the project plan.
Strong applications clearly demonstrated the applicant has the time and capacity to undertake the research.	Strong responses clearly described: <ul style="list-style-type: none">▪ the applicant has the time and capacity to undertake the research.
Strong applications clearly evidenced applicant experience in research training, mentoring and supervision (where appropriate).	Strong responses clearly described: <ul style="list-style-type: none">▪ the relevant experience within the research team.
Strong applications clearly demonstrated the capability of the researcher or team to build collaborations both within Australia and internationally (where appropriate).	Strong responses clearly described: <ul style="list-style-type: none">▪ the capability of the applicant to collaborate with experts in the field.



Criterion 2: Project quality and innovation

Describe the:

- contribution to an important gap in knowledge or significant problem
- novelty/originality and innovation of the proposed research (including any new methods, technologies, theories or ideas that will be developed)
- clarity of the hypothesis, theories and research questions
- cohesiveness of the project design and project plan (including the appropriateness of the aim, conceptual framework, method, data and/or analyses)
- extent to which the research has the potential to meet objectives 1d and 3a of the National Soil Strategy.

Strength	Example
Strong applications clearly demonstrated the contribution to an important gap in knowledge or significant problem.	Strong responses clearly described: <ul style="list-style-type: none"> ▪ the research contributes to a key research gap/problem ▪ the research targets soil carbon dynamics; soil hydrology; soil biology and nutrients; and/or the soil/root interface.
Strong applications clearly demonstrated novelty/originality and innovation of the proposed research (including any new methods, technologies, theories or ideas, which will be developed).	Strong responses clearly described: <ul style="list-style-type: none"> ▪ new methods, technologies, theories or ideas which will be developed.
Strong applications clearly outlined the hypothesis, theories and research questions.	Strong responses clearly described: <ul style="list-style-type: none"> ▪ the project hypothesis, theories and research questions.
Strong applications clearly demonstrated cohesiveness of the project design and project plan (including the appropriateness of the aim, conceptual framework, method, data and/or analyses).	Strong responses clearly described: <ul style="list-style-type: none"> ▪ the project aims and what the project will deliver ▪ how the project will be delivered.
Strong applications clearly demonstrated the extent to which the research has the potential to meet objectives 1d and 3a of the National Soil Strategy.	Strong responses clearly described: <ul style="list-style-type: none"> ▪ the extent to which the project can support further research into the improvement of soil productivity and sustainability.



Criterion 3: Benefit

Describe the potential benefits including the:

- new or advanced knowledge resulting from outcomes of the research
- economic, commercial, environmental, social and/or cultural benefits for Australia and international communities
- potential contribution to capacity in the Australian Government’s National Science and Research Priorities and other priorities identified by Government.

Strength	Example
Strong applications clearly outlined new or advanced knowledge resulting from outcomes of the research.	Strong responses clearly described: <ul style="list-style-type: none">▪ the project’s contribution to new and improved knowledge in soil science.
Strong applications clearly outlined economic, commercial, environmental, social and/or cultural benefits for Australia and international communities.	Strong responses clearly described: <ul style="list-style-type: none">▪ who the research will benefit and how.
Strong applications clearly outlined the potential contribution to capacity in the Australian Government’s National Science and Research Priorities and other priorities identified by Government.	Strong responses clearly described: <ul style="list-style-type: none">▪ potential contributions to the Australian Government’s National Science and Research Priorities and other priorities identified by Government▪ how the project would focus on critical assets; build capacity for improved accuracy and precision in predicting change; improve understanding of sustainable limits for productive use of soil; or support protection, restoration and remediation of soil.

Criterion 4: Feasibility

Describe the:

- cost-effectiveness of the research and its value for money, including the completion of the application Budget template
- suitability of the environment for the research team and their project, and for Higher Degrees by Research students where appropriate
- availability of the necessary facilities to complete the project
- extent to which the project's design, participants and requested budget create confidence in the timely and successful completion of the project
- potential risks to the success of the project and how these are to be managed or mitigated.

If the project involves Aboriginal and Torres Strait Islander research describe:

- the strategies for enabling collaboration with Australian Aboriginal and Torres Strait Islander communities where appropriate (for example, dialogue/collaboration with an Indigenous cultural mentor)
- any existing or developing, supportive and high quality research communities.

Strength	Example
Strong applications clearly demonstrated the cost-effectiveness of the research and its value for money.	Strong responses clearly described: <ul style="list-style-type: none">▪ the cost-effectiveness of the research▪ the project's value for money.
Strong applications clearly demonstrated the suitability of the environment for the research team and their project, and for Higher Degrees by Research students where appropriate.	Strong responses clearly described: <ul style="list-style-type: none">▪ suitability of the environment for the research team and their project.
Strong applications clearly demonstrated the availability of the necessary facilities to complete the project.	Strong responses clearly described: <ul style="list-style-type: none">▪ availability of the necessary facilities to complete the project.
Strong applications clearly demonstrated the extent to which the project's design, participants and requested budget create confidence in the timely and successful completion of the project.	Strong responses clearly described: <ul style="list-style-type: none">▪ the project budget and project plan are realistic and achievable.
Strong applications clearly outlined potential risks to the success of the project and how these are to be managed or mitigated.	Strong responses clearly described: <ul style="list-style-type: none">▪ potential risks to the success of the project and how these are to be managed or mitigated.



Strength	Example
If the project involves Aboriginal and Torres Strait Islander research:	
Strong applications clearly demonstrated the strategies for enabling collaboration with Australian Aboriginal and Torres Strait Islander communities where appropriate.	Strong responses clearly described: <ul style="list-style-type: none"><li>strategies and sufficient evidence/commitment to engaging with Aboriginal and Torres Strait Islander communities, culture and knowledge in a respectful, meaningful and culturally safe way.
Strong applications clearly outlined any existing or developing, supportive and high quality research communities.	Strong responses clearly described: <ul style="list-style-type: none"><li>relevant research communities.