

Bushfire information database – scoping study

Questions raised during the online project briefing

1. Will it be possible to develop a consortium of agencies for this project?

Yes, we fully support collaboration across different university research teams, agencies and others to bring this together. Important information will come, not only from universities, but also from government agencies, emergency services departments and others. All this information has to be considered. A consortium is certainly encouraged.

2. Where can we read further details about the EOI, guidelines for EOI preparation etc?

The EOI (https://www.naturalhazards.com.au/sites/default/files/2022-02/Bushfire_Info_Database_EOI_Feb22.pdf.pdf) and submission form (https://www.naturalhazards.com.au/sites/default/files/2022-01/NHRA_EOI_submissionform_final.pdf) are both available on our website. If you have any problems accessing these documents, please email research@naturalhazards.com.au.

3. Are you interested in climate trends from past observations, and/or future projections from modelling?

Yes, such information can be used to contribute to understanding bushfire risk and understanding the potential for changes for bushfire behaviour.

4. Would the production of a specialised database of operational + research radar + geostationary satellite bushfire cases be a good fit for this project?

For this project, we aim to understand what data and datasets exist, rather than the project producing a new database.

5. Would the construction of datasets of bushfire case studies including radar, satellite, in-situ, and numerical simulations be a good fit for this project?

This project is not intended to develop those databases. The objective is to look at what exists, and what plans there are to expand that data of interest, not the construction of the data-set itself.

6. Is a gap analysis of what observations or combinations of observations and modelling we would need to advance bushfire research be a good fit for this project?

Yes, a gap analysis is something that we have requested. This would include observations and modelling from various perspective to see whether or not gaps exist, and where these gaps exist in what we are doing.

7. The use of drones for mapping and importing into GIS.

Yes, we are looking to collect data as it is being developed. The project itself does not aim to be building data sets, but having the capability to provide information regarding custodians of data so it can be made accessible is important.

8. Do you require people cognizant of bushfire in this tendering e.g. that have that domain expertise?

It will be difficult to do this well if you do not have an understanding of bushfire risk management and what happens in a bushfire in your team. Though such an understanding is not essential, without such an understanding, it will be difficult to do a gap analysis or to work out what is important data from a bushfire perspective.

9. How much detail do you require for the part about "highlighting areas where new methodologies are being developed, particularly using new satellite and aerial-based sensing systems"?

As much as you think is appropriate. We are not looking for the EOI submissions to go into great detail about such technology. We are looking to understand how your approach would contribute to the knowledge we have, the gap that exists, and how these methodologies might reduce our disaster risk and exposure from bushfires.

10. What data will we be required to focus on - satellite-based, ground-based, crowd-based, IoT based? Or a combination of them and further innovation on the fusion of them?

We are looking at data from all sources. All that are mentioned in this question, and others will be focused on. They could be post-disaster surveys, and a range of other things. Everything that will help us understand what the risks from bushfires are, how we can minimise these risks, what we can learn about what is changing over time, what is predicted to come, and how we can prepare for that.

11. Please indicate the specific majors you need.

What we need is to understand is the major collections of data that exist, that will contribute to a good understanding of bushfire risk. Australian Research Data Commons (ARDC) indicates an interest in bushfire intensity, bushfire fuel loads and distribution, impact on properties, impacts on communities, etc. There are vast areas from which data will come from. We are interested in your responses to the EOI to talk to us about where that data will come from, and how you will access that information.

12. We are looking at developing some of this for teaching an undergraduate course at Australian National University next semester. I am interested in the reproducibility of the project.

The outcomes of this project will be made publicly available, but the project itself is not generating new data. It will aim to understand the data, where it sits, and how to access it.

13. Please provide further details of the project scope.

The scope of this project is to understand what we have in Australia in relation to bushfire data, where it exists, what gaps there are and what we can learn from international data collections and international approaches to building a knowledge and understanding of the data that exists, and that can be used and is being used to reduce disaster risk from bushfire. Building a database is beyond the scope of this project.

14. What exactly is 'bushfire data' in this context? Is this about the events themselves and their impact? Or is information about the preconditioning of fire (vegetation, fuels, weather, climate, etc) also considered?

Bushfire data is all of those things mentioned in the question. It is anything that helps us understand the nature of fire, the risk from fire, the progression of fire, the recovery from fire, and what we can do to keep fire from spreading, if that is feasible.

15. Are there planned links with the Australian Research Data Commons (ARDC) bushfire dataset collation activities underway at the moment?

Yes, the successful respondent to this project will be encouraged to engage with the group undertaking the ARDC bushfire dataset collation and we will facilitate this and provide assistance where we can.

16. Do you need to know about the state-of-the-art methods available for bushfire detection or prediction using video or image datasets?

It would be helpful to understand what methods are being used. There is a lot of data that is being generated, but the purpose of this data is not entirely clear. Great detail is not required, however, it is important to be aware of such data, to understand the different types of data that are being generated, and the use and purpose of this data as best as your team can explain it.

17. Does the EOI expect to see issues of data quality and data governance as well as a conceptual design to manage the database?

Ideally yes. That will be subject to a discussion with the successful provider for this project, where we will consider the availability of information that will allow them to determine data quality and data governance. These are important issues that, as a research centre, we are very much focusing on. We are also starting independently with the Australian Research Data Commons (ARDC) to improve the quality of research data in bushfires and natural hazards.

18. Although the tender is not to develop the database, is there a need in the EOI to explore in advance the potential 'architecture' of the database for usability, accessibility and data governance perspectives.

This would be preferred and would be of value to get a sense of what might work. Particularly if there are examples of where things might happen. The successful applicant could give ideas of how this may be possible. Understanding how it all comes together would be valuable, but it is not a major part of what we are looking for, however, we would anticipate that the right project team would be able to give us some ideas about how this would be done.

19. What do you mean by "peer review"?

This is a quality control process. The final report must be reviewed by someone who is an expert in the field and independent of the project.

20. What is the maximum project duration and budget?

This information is in the EOI. The project duration is nine months and the maximum budget is \$150,000 ex GST.