College/Division:	ANU College of Science
Faculty/School/Centre:	Fenner School of Environment & Society
Position Title:	Postdoctoral Fellow
Classification:	Level A or Level B
Position No:	TBA
Responsible to:	Head, Centre for Water and Landscape Dynamics
Number of positions that report to this role:	
Delegation(s) Assigned:	NA

PURPOSE STATEMENT:

The Fenner School of Environment & Society is a leading centre of environmental research in Australia. Fenner's Centre for Water and Landscape Dynamics is a world leader in observation technology for real time environmental information. We develop new methods to measure, monitor and forecast climate, water availability and landscape conditions. Our solutions combine Big Data from satellite observation and sensor networks, with field research, biophysical modelling and machine learning.

The position may include multiple disciplines that combine cutting-edge science and technology with an applied research focus. They are associated with research projects in the following areas: (1) developing multi-sensor data-fusion methods for precipitation analysis and nowcasting; (2) hydrological modelling and forecasting of soil moisture and vegetation condition; (3) combining satellite remote sensing and airborne LiDAR to predict floodplain and wetland hydrodynamics; (4) derivation of vegetation properties from satellite remote sensing and LiDAR for environmental condition and fire risk assessment.

The Postdoctoral Fellow is expected to undertake work in all three areas of academic activity –research, education and service (including outreach), but with emphasis on research. The allocation of time to each area will be discussed with the position supervisor annually and be reflective of the external funding conditions that support the appointment, the appointees research agenda, school and interdisciplinary teaching requirements and leadership opportunities within the School environment. The Postdoctoral Fellow may also be required to supervise or assist in the supervision of students, and contribute cooperatively to the overall intellectual life of the School, College and University.

POSITION DIMENSION AND RELATIONSHIPS:

The Postdoctoral Fellow will be a member of the Fenner School of Environment & Society, accountable to the Head of the Centre for Water and Landscape Dynamics and Director of the School. The Postdoctoral Fellow will be expected to work collegially, leading by example to develop and maintain effective, productive and beneficial workplace relationships within the all academic and professional School and College staff, students and honorary appointees, as well as with industry stakeholders. This position will also have a mentoring role for students and will engage in collegial and productive collaborations with local, national and where possible, international colleagues.

Role Statement:

In their role as an Academic Level A or B the Postdoctoral Fellow is expected to:

1. Undertake independent research in the area of spatial environmental modelling and remote sensing with a view to publishing original and innovative results in refereed journals, present research at academic seminars and at national and international conferences, and collaborate with other researchers at a national level. This includes working as part of a team on an externally funded project subject to deadlines.
2. Collaborate with senior staff to actively seek and secure external funding, assist to prepare and submit research proposals to external funding bodies as appropriate.
3. Subject to the requirements of the funding source and where an opportunity exists, the occupant may be required to contribute to the teaching activities of the School at the undergraduate and graduate levels. This includes, but is not limited to, the preparation and delivery of lectures and tutorials, the preparation of online material, marking and assessment, consultations with students or acting as subject coordinators.
4. Supervise students working on individual or group projects at undergraduate, honours, graduate-coursework levels. Assist with supervision of research students.
5. Assist to supervise research support staff in your research area.

6. Actively contribute to all aspects of the operation of the School.
7. Assist in outreach activities including to prospective students, research institutes, industry, government, the media and the general public.
8. Maintain high academic standards in all education, research and administration endeavours.
9. Take responsibility for their own workplace health and safety and not wilfully place at risk the health and safety of another person in the workplace.
10. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.
11. Other duties as required that are consistent with the classification of the position.

Skill Base
Level A
A Level A academic will work with the support and guidance from more senior academic staff and is expected to develop their expertise in teaching and research with an increasing degree of autonomy. A Level A academic will normally have completed four years of tertiary study or equivalent qualifications and experience and may be required to hold a relevant higher degree.

A Level A academic will normally contribute to teaching at the institution, at a level appropriate to the skills and experience of the staff member, engage in scholarly, research and/or professional activities appropriate to their profession or discipline, and undertake administration primarily relating to their activities at the institution. The contribution to teaching of Level A academics will be primarily at undergraduate and graduate diploma level.

Level B
A Level B academic will undertake independent teaching and research in their discipline or related area. In research and/or scholarship and/or teaching a Level B academic will make an independent contribution through professional practice and expertise and coordinate and/or lead the activities of other staff, as appropriate to the discipline.

A Level B academic will normally contribute to teaching at undergraduate, honours and postgraduate level, engage in independent scholarship and/or research and/or professional activities appropriate to their profession or discipline. The academic will normally undertake administration primarily relating to their activities at the institution and may be required to perform the full academic responsibilities of and related administration for the coordination of an award program of the institution.

SELECTION CRITERIA:
Level A

1. A PhD (or awarding of a PhD within six months of appointment commencement) in environmental science, Earth sciences or remote sensing, or equivalent qualifications and experience in a related area, with a track record of independent research in the field of spatial environmental modelling and/or remote sensing as evidenced by publications in peer-reviewed journals and conferences.
2. Evidence of experience that is relevant to spatial research in some or all of the following areas: environmental remote sensing; spatial hydrological or land surface modelling; or airborne LiDAR analysis. Specific research experience in practical management applications for information on precipitation, hydrology, bushfire risk or ecosystem condition would be an advantage but is not essential.
3. Strong computational skills using interpreted or compilable languages. Familiarity with scaling analysis to HPC environments, shell scripting and processing geospatial data in a variety of vector and raster formats would be an advantage but is not essential.
4. An ability and commitment to contribute to bids for competitive external funding to support individual and collaborative research activities.
5. Evidence of an ability and willingness to teach at all levels.
6. The ability to assist in the supervision of students working on research projects.
7. The ability to work as part of a team and to meet deadlines.
8. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
9. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

Level B

1. A PhD in environmental science, Earth sciences or remote sensing or a related area, with a track record of independent research in the field of spatial environmental modelling and/or remote sensing as evidenced by publications in peer-reviewed journals and conferences, a record of developing and maintaining collaborations and by other measures such as awards, and invitations to present at conferences.

2. Evidence of experience that is relevant to spatial research in some or all of the following areas: satellite remote sensing applied to precipitation, hydrology, bushfire management or ecosystem research; spatial hydrological or land surface modelling; or airborne LiDAR analysis, with the ability to articulate and prosecute innovative research in this field. Specific research experience in practical management applications for information on precipitation, hydrology, bushfire risk or ecosystem condition would be an advantage but is not essential.
3. Strong computational skills using interpreted or compilable languages. Familiarity with scaling analysis to HPC environments, shell scripting and processing geospatial data in a variety of vector and raster formats would be an advantage but is not essential.
4. A demonstrated ability and commitment to apply for competitive external funding to support individual and collaborative research activities.
5. Evidence of an ability and willingness to teach at all levels.
6. An ability to supervise and graduate high quality PhD/Masters research students.
7. The demonstrated ability to work as part of a team, contributing to team management and meeting deadlines for project elements.
8. Excellent oral and written English language skills and a demonstrated ability to communicate and interact effectively with a variety of staff and students in a cross-disciplinary academic environment and to foster respectful and productive working relationships with staff, students and colleagues at all levels.
9. A demonstrated understanding of equal opportunity principles and policies and a commitment to their application in a university context.

| **Delegate Signature:** | Albert van Dijk | **Date:** | 11/12/2019 |
| Printed Name: | Albert van Dijk | **Position:** | professor |

| **References:** |
| Academic Minimum Standards |

Pre-Employment Work Environment Report

In accordance with the Work Health and Safety Act 2011 (Cth) the University has a duty to provide a safe workplace.

- This form must be completed by the Supervisor of the advertised position and forwarded with the job requisition to Recruitment and Appointments Branch, Human Resources Division. Without this form jobs cannot be advertised.

- This form is used to advise potential applicants of work environment hazards prior to application.

- Once an applicant has been selected for the position consideration should be given to their inclusion on the University's Health Surveillance Program where appropriate – see Health Surveillance Procedure

- Enrolment on relevant Work, Health and Safety (WHS) training courses should also be arranged – see WHS Training & Induction

- Consideration should be given as to whether 'Regular' hazards identified below should be listed as 'Essential' in the Selection Criteria

Potential Hazards

- Please indicate whether the duties associated with appointment will result in exposure to any of the following potential hazards, either as a **regular** or **occasional** part of the duties.

TASK	regular	occasional	TASK	regular	occasional
keyboarding	X	☐	laboratory work	☐	☐
lifting, manual handling	☐	☐	work at heights	☐	☐
repetitive manual tasks	☐	☐	work in confined spaces	☐	☐
catering / food preparation	☐	☐	noise / vibration	☐	☐
fieldwork & travel	☐	X	electricity	☐	☐
driving a vehicle	☐	X			
NON-IONIZING RADIATION			**IONIZING RADIATION**		
solar	☐	☐	gamma, x-rays	☐	☐
ultraviolet	☐	☐	beta particles	☐	☐
infra-red	☐	☐	nuclear particles	☐	☐
laser	☐	☐			
radio frequency	☐	☐			
CHEMICALS			**BIOLOGICAL MATERIALS**		
hazardous substances	☐	☐	microbiological materials	☐	☐
allergens	☐	☐	potential biological allergens	☐	☐
cytotoxics	☐	☐	laboratory animals or insects	☐	☐
mutagens/teratogens/ carcinogens	☐	☐	clinical specimens, including blood	☐	☐
pesticides / herbicides	☐	☐	genetically-manipulated specimens	☐	☐
			immunisations	☐	☐

OTHER POTENTIAL HAZARDS (please specify):

Supervisor's Signature:	Albert van Dijk	Print Name:	**Albert van Dijk**	Date:	**11/12/2019**