

Fig. 1 DePSS Ethics checklist flowchart based on NAS policy document: Guidelines-for-ethical-clearance-NAS_approved 2022.pdf NAS ethics website: https://www.up.ac.za/faculty-of-natural-agricultural-sciences/article/32597/research-ethics

Project title:

Supervisor full name and affiliation:

Researcher/Postgraduate full name and affiliation:

Does the Research Project involve the following activities?:

#	Category	Definition	Yes/No/Not applicable	Supervisor signature	Researcher/Student signature
1	Human participants	A Human participant is defined as (a) A living individual on whom the researcher is conducting research by collecting data by intervention or interaction with the individual, or (b) obtaining identifiable private information. Human participants extends also to the remains and data collected from deceased persons.			
2	Chemical biohazards	ethics applications are required in the case where special permissions or permits or facilities are required for the chemical(s) involved. This applies to radioactive compounds, persistent organic pollutants (POPs as listed in the Stockholm Convention Regulations and Rotterdam Convention Regulations), and drugs of abuse. In addition, ethics approval is required when toxic chemicals are to be applied, tested or used outside of a controlled laboratory environment or in large quantities within a laboratory or test facility, for example the application of pesticides in an agricultural setting outside the normal operations of the farm concerned.			
3	Organismal biohazards	 Viruses, pests or pathogens* of humans or animals (for example, research on <i>Mycobacterium tuberculosis</i> will require a Biosafety level 3 lab, whereas the non- pathogenic <i>Mycobacterium smegmatis</i> only requires a Biosafety level 1 lab). Environmental samples or animal tissues that may harbour viruses, pests or pathogens* of humans or animals. Transport and storage of animal tissues requires a section 20 and must comply with Biobank regulations as set by DALRRD. (Please refer to the section on animal ethics.) Quarantine plant pathogenic viruses, pests or pathogens* Biological material that contains toxins or compounds that have potential to harm human health Export of plant propagation material (e.g. seed, cuttings etc) to a country where that plant is subject to quarantine. * This includes all disease-causing organisms (e.g. phytoplasma, 			

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		fungi, bacteria, oomycetes, parasites, nematodes, insects etc) Note: Research on Animals, where the animal itself is a biohazard (e.g. mole-rat that can bite student) should be evaluated by the "Animals" committee member, not "Biohazard- organismal".		
4	Organismal biohazards	Are Import permits or Provincial sampling permits or Landowner permission letters required for import or sampling the biological materials or access to field sites/facilities for the research? This includes sampling from the UP botanical living collections (Manie van der Schijff Botanical Garden and Cycad collection). Sampling/transport of animals or animal tissues should be addressed under point (12) as it may require a Section 20 approval.		
5	Organismal biohazards	If answered YES to the above point, have copies of the permit(s) and/or permission letter(s) been uploaded to the DePSS drive for the Researcher/Student applicant.	·	
6	Organismal biohazards	If answered YES to the above point, will the Supervisor and Applicant ensure that valid permit/permission documents are renewed and uploaded for the duration of the project?		
7	GMOs- laboratory or contained plant growth room only	In terms of the genetically modified organisms (GMO) Act, genetically modified organisms may be living plants, insects, fungi, bacteria, other organisms, viruses, or animals whose genome is altered artificially by insertion of selected genes or components of genes or the removal of selected genes or the components of genes. This currently also includes all gene-edited organisms, based on the October 2021 announcement by DALRRD	d	
8	GMOs- laboratory or contained plant growth room only	If answered YES to the above point, has a copy of the DALLRD laboratory certification for GMO research for the rooms where the research will be conducted been uploaded to the DePSS drive for the Researcher/Student applicant. Application forms are available from https://www.dalrrd.gov.za		
9	GMOs- laboratory or contained plant growth room only	If answered YES to the above point, will the Supervisor and Applicant ensure that valid permit/permission documents are renewed and uploaded for the duration of the project?		
10	GMOs – glasshouse or	Glasshouse and field trials of GMOs for research (non- commercial) purposes requires additional approval from		no 2 of 6

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	field trials	DALRRD			
11	External or	External numeric data refers to data from a source external to the			
	internal	university, data not collected by the UP or individuals at UP.			
	numeric data	Examples of external data include data from government, banks,			
		businesses or commercially provided information. Internal data			
		refer to data that the UP generates, such as, procured and			
		consolidated from different units or individuals within the			
		organisation. In the context of UP, internal data will, for example,			
		be data obtained from Bureau for Institutional Research and			
		Planning (BIRAP). Data collected by other researchers within the			
		university will also be considered internal data since that data will			
40	A ' I -	belong to the university.			
12	Animals	Research on live experimental animals and/or any sample derived			
		from an animal. An experimental animal is defined as a live			
		sentient non-human vertebrate, including eggs, foetuses and embryos, that is, fish, amphibians, reptiles, birds and mammals,			
		and encompassing domestic animals, purpose-bred animals,			
		farm animals, wildlife and higher invertebrates such as the			
		advanced members from the Cephalopoda and Decapoda.			
		This includes research which requires a section 20 of the animal			
		diseases act of 1984 (Act no 35 of 84) which describe the			
		limitations on investigations, sampling, transport, experiments			
		and research with, and manufacture and evaluation of, certain			
		products (see the NAS Ethics guidelines for more details).			
13	Health Science	Health research (and any research connected to the Health			
	Research	Sciences Faculty) that needs to be approved by the Health			
		Sciences Research Ethics Committee (HSREC). The National			
		Health Act defines health research as any research which			
		contributes to knowledge of:			
		a) the biological, clinical, psychological or social processes in			
		human beings;			
		b) improved methods for the provision of health services;			
		c) human pathology;			
		d) causes of the diseases;			
		e) the effects of the environment on the human body;			
		f) the development or new application of pharmaceuticals,			
		medicines			
		g) the development of new applications of health technology.			

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	Explanations on any of the above points by Supervisor		Supervisor signature
			and date
	Explanations on any of the above points by Researcher/Student		Researcher/Student
			signature and date

	Yes/No	DePSS ethics number allocated to this application by HOD*	HOD signature	Date
The project requires NAS Ethics approval				

^{*}Format = DePSS-ethics-Year-Number

Changes during the course of a Research Project

It is the responsibility of the Supervisor to ensure that all compliance documents are uploaded to the Supervisors PG shared drive managed by DePSS (Rene Fryer; Chair of PG studies & research; HOD) for the duration of the research project.

If the project changes so that this DePSS checklist needs to be updated or NAS Ethics approval is required, it is the responsibility of the Supervisor to arrange with the student/researcher to make the necessary application.

Group applications (DePSS)

For group applications by a research leader (supervisor) covering more than one student/researcher, the research leader can use the same form but should sign every section, and insert a table with names, student numbers, degrees, project titles and signatures of all team members. It is the responsibility of the research leader to ensure that all team members are aware of the Research Ethics issues that are relevant to their research project and the requirement to comply with the Research Ethics policies of the University of Pretoria. This checklist is based on the policy document: "Guidelines-for-ethical-clearance-NAS_approved 2022.pdf" which was approved at the NAS Faculty Board in 2022, which complies with University of Pretoria policies.

Individual student DePSS checklist applications are valid until the student graduates, unless the ethical compliance of the project changes. Group applications (DePSS) are valid for five years, but should be renewed each year if new team members join the group. The renewal should also list those students that completed in the previous year.

For questions about this checklist, please consult the Chair of Postgraduate Studies and Research or HOD, DePSS

Department of Plant and Soil Sciences Ethics checklist Checklist prepared by Prof Dave Berger, Prof Juan Vorster, DePSS.

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