Title: PROCEDURES – FIELD WORK HEALTH AND SAFETY

1. Title
   Procedures – Field Work Health and Safety

2. Organisational Scope
   All persons participating in University-approved field work are to comply with this policy as the University has Federal, State and Common Law liability to all participants.

   Volunteers. Under current policy the use of volunteers is permitted on the clear understanding that the University will not accept responsibility for any claim on the University arising from injury or death of voluntary workers. Queries concerning the University policy on volunteers should be directed to the Risk Manager.

   Volunteers must be given a safety induction prior to their participation in the field work. The induction shall include an overview of the University Procedure - Field Work Health and Safety, and information on the nature of the field work, identified hazards, the risks associated with the hazards, and the proposed control measures; the operation of any safety equipment to be used; the correct use of any personal protective equipment; first aid facilities; when-lost procedures; communications procedures; and emergency procedures. It shall include an acknowledgment of the induction by the volunteer.

   University personnel working in institutions interstate and overseas should follow local state and institutional workplace health and safety requirements with respect to their field work. Staff and students working on premises owned by another entity should contact the Executive Director Finance and Administration, Risk Management and Audit Assurance and that of the other institution to clarify any insurance issues.

3. Definitions
   For the purpose of this policy, the following definitions apply:

   (a) Field activities and field work are defined as any work, studies or research approved by the Head of School or nominated deputy on behalf of Edith Cowan University (ECU) and conducted by staff, postgraduate and undergraduate students at various field sites which may be on-campus, or at off-campus urban, rural (terrestrial), freshwater or marine locations.
(b) **School** means School, Centre, Co-operative Research Centre, Department, Division, Institute or Unit under whose auspices field work is conducted.

(c) **Head of School** is the nominated person in charge of the school.

(d) **Remote** field work **is defined as any work carried out at any non-permanently staffed University site and which entails:**

- Working at a **non-urban site off-campus** where it takes more than half an hour to get medical aid to an injured or ill person.
- Off-road in areas includes river, inland waterways and estuarine locations where very little traffic is likely or where topographic features would make it difficult to summon or receive help.

The time taken for medical aid to reach an ill or injured person is more significant than distance *(Workplace Health and Safety (First Aid) Advisory Standard 1996 - James Cook University)*.

(e) **Off-road** is any location other than a major or minor-formed road.

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FIELD WORK HEALTH AND SAFETY

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FIELD WORK HEALTH AND SAFETY

Staff and students who proceed on field trips and carry out work in remote locations must be aware that they place themselves in a situation where they are exposed to higher than normal levels of risk. This policy establishes workplace health and safety and administrative arrangements for the safe conduct of field work locally, in locations classified as remote, and overseas. The policy is based upon current practices observed within the University as well as those commonly used in other Australian Universities, Commonwealth and State Government authorities.

Under the Workplace Health and Safety Act and Regulation, the University as an employer has an obligation to ensure the workplace health and safety of employees at work and others at the workplace. In addition, the University is obliged to provide a safe place of work for non-employees, which is the category to which some postgraduate students, all undergraduate students and visitors belong.

A field site is a workplace when University personnel are engaged in University approved field work.

Local rules or modified procedures particularly appropriate to activities of a School but consistent with this policy may be developed. Such rules or modifications to this policy must be in writing and a copy lodged with the Occupational Safety and Health Manager. Any departure from this policy must have the written approval of the Edith Cowan University Occupational Safety and Health Branch.

With regard to University-approved field work it is not acceptable for a staff member or student to absolve the University of responsibility and to carry the risk themselves. The University does not accept such a unilateral assumption of risk. In both situations the relationship between the person, the nature of their work, and the University can be readily demonstrated and it is this relationship and the obligations of the concerned parties that would be considered by the Workplace Health and Safety Inspectorate, and in a Court of Law.

1. RESPONSIBILITIES

(a) The School Representative, Unit Co-ordinator and the Officer in Charge shall carry out risk assessments of field work activities and in the development and implementation of safe work practices, and shall assess all field work operational details.

(b) The Head of School or nominee shall give final approval for all field work.

(c) The Officer-in Charge (OIC) is that person authorised by the Head of School to lead the field work, and is responsible for the health and safety for all persons attending for the duration of the field work. The OIC has the authority to cancel, postpone or modify the planned schedule at any time during the field trip.

(d) Authorised Officers are those persons nominated by the Head of School and listed on the Field Trip Operational Details form (Appendix 1). Authorised Officers shall initiate Search and Rescue (SAR) procedures in the event that the field party fails to return by the agreed time which is indicated on the Field Trip Operational Details form.

(e) All persons participating in field activities have an obligation - a duty of care - to work safely in the field, taking care to protect their own health and safety and that of fellow workers and students.

(f) This procedure and agreed Faculty/School/Centre rules must be complied with and persons who deliberately expose themselves or others to risk by non-compliance are to be counselled and if necessary excluded from field work. Heads of School may also instigate disciplinary action for unsafe practices or non-compliance with standards and procedures.

2. ADMINISTRATIVE ARRANGEMENTS

(a) Field Trip Operational Details form: A Field Trip Operational Details form (Appendix 2) must be completed and submitted to the School Representative/Unit Coordinator prior to departure on all terrestrial and freshwater field trips. The Marine Field Trip Operational Details form (Appendix 3) must be completed for all field work involving diving and marine boating activities. Copies of these forms are available from School Representative/Unit Coordinator, the Diving Safety Officer and the Occupational Safety and Health Manager. The form should be completed well in advance of the intended trip so as to allow time for the trip details to be properly assessed and approved.

(b) Boating and Diving activities: Field work involving boating and diving activities must comply with the current ECU Boating Safety Rules (under development) and the ECU Diving Operations Manual.
Copies of these documents are held by School Representative/Unit Coordinator, the Diving Safety Officer, and the Occupational Safety and Health Manager or can be downloaded from the ECU and Faculty of Computing, Health and Science Occupational Safety and Health websites.

(c) First Aid: The presence of a person with a current qualification in Senior First Aid is mandatory for remote field work. Training may be undertaken through courses offered by the Red Cross, St. John Ambulance, or other approved provider. See Edith Cowan University First Aid Policy (http://www.ecu.edu.au/GPPS/policy/hr/hr115a2.php).

(d) Communications training and instruction: the communications operator for a field trip must be given instruction or training appropriate for the communication system being used. Completion of this instruction must be noted on the Field Trip Operational Details form. Courses are run on a needs basis. In the first instance contact the Diving Safety Officer in this regard.

(e) Four-wheel Drive (4-WD) Vehicles: Completion of the University approved 4-Wheel Drive instruction course and test is a pre-requisite for staff and students who wish to use a 4-wheel drive vehicle in the course of their work, including local and remote field work, and for towing a boat or trailer.

- This is a requirement for both University-owned vehicles and for hired 4-wheel drive vehicles.
- No other personnel are authorised to drive except in a life-saving emergency and such an occasion is to be logged.
- Completion of instruction and testing must be noted on the Field Trip Operational Details form.

3. COMMUNICATIONS

(a) All vehicles for remote field work should be fitted with a 2-way radio with frequencies which include those of the Royal Flying Doctor Service and other appropriate Commonwealth and State Government agencies, or

(b) The field party must be equipped with another comparable 2-way communications system suitable for transmissions from the field locality.

(c) All personnel undertaking field work must be instructed and trained in the use and maintenance of the communication equipment to be used on that trip.

(d) Field staff should inform local personnel or authorities of the operational details.

(e) Daily call-in schedules should be agreed to prior to departure, set up in advance with local personnel or authorities and strictly adhered to.

(f) Whatever communications system is used within Australia, a minimum of one contact per day at a prearranged time must be made with the supervisor/Head of School or an agreed nominee. Personnel undertaking field work overseas should arrange for some regular communication with an Australian based contact eg. E-mail once a week.

(g) The authorised officer for the field trip must be advised of the safe return of the field party.

(h) The OIC should consider whether there is a requirement for radio communication between participants of the field activity and make arrangements accordingly.

4. IDENTIFICATION AND CONTROL OF HAZARDS IN FIELD WORK

4.1 SIZE AND COMPOSITION OF A FIELD PARTY

The safety and welfare on an individual undertaking field work in a remote location is better assured when working with another person than when working alone. There is little doubt that serious legal questions of foreseeability and recklessness would be raised were a serious incident or accident to occur to a staff member or postgraduate sent out alone to conduct potentially dangerous work without arrangements being made for safe working practices, regular communications, contingency and emergency procedures.

(a) In all but the most exceptional circumstances the minimum size of a field party carrying out remote field work shall be two. Staff or students must not go alone to remote locations.

(b) If there is a need to work alone because of some exceptional circumstance, then the person concerned must complete the Field Trip Operational Details form and Hazard Identification and Hazard Control form (Appendix 3), and the trip must then be discussed with the supervisor (in the case of an honours or postgraduate student), with the School Representative/Unit Coordinator and with the Head of School. Permission to work alone may be granted only after the Head of School has been fully informed of the nature of the work, its location, is fully satisfied with the communication and other arrangements, and on
the recommendation of the School Representative/Unit Coordinator.

(c) Approval for solo field work must be given in writing and signed by the Head of School, and School Representative/Unit Coordinator.

(f) Field work involving undergraduate teaching needs to have an acceptable student-to-staff ratio so that appropriate transport and supervision arrangements can be implemented and to ensure effective risk management. An acceptable ratio of students to staff would depend upon:

- the prior training, experience and maturity of the students,
- the nature of the field work.

A ratio of fifteen-to-one is recommended as a general maximum student-to-staff ratio for field work involving undergraduate teaching. For routine operations with an established safe history, a maximum ratio of thirty-to-one may be acceptable. Careful consideration shall be given by School management before approval is given to operations involving a larger student-to-staff ratio.

4.2 FIELD WORK ACTIVITIES AT THE SITE

Field work requires the use of various skills, many of which are acquired on the job. Training is available for certain specialist outdoor activities. It is vital that personnel understand what they are doing, and what is expected of them.

- Safe work practices must be established and effectively communicated verbally and in writing to personnel for whatever field activities are to be undertaken at a field site eg. undergraduate students must be provided with both a written and verbal instruction concerning safety requirements such as clothing and footwear necessary for a particular field activity. Essential information that must be included in a field work safety induction are given in Appendices 4, 5 and 6.
- Training must be provided and competency assessed for activities such as abseiling, rock and tree climbing, and diving, or as otherwise required.
- Where an activity is covered by a Workplace Health and Safety Regulation or by an Australian Standard, then safe work practices must accord with that standard eg. caving and underground work must comply Australian Standard AS2865-1995 Safe working in a confined space.
- Where specialist equipment used for field work is covered by an Australian Standard, then the selection, maintenance and use of the equipment must comply with that standard eg. harnesses, cordage, hard hats.
- In the absence of a specific activity standard, safe work practices and training should generally accord with those of other Universities, government or research organisations eg. AIMS, CSIRO, DOE, undertaking similar activities.

4.3 ETIQUETTE REQUIREMENTS

University personnel undertaking approved field work must ensure that the necessary permits and licenses for the work are obtained, and also obtain permission to traverse and access private and public lands.

Overseas visitors should be advised of the regulation on the export of specimens of Australian flora and fauna, movable items of cultural heritage significance, and requirements for the deposition of Australian type material. Refer to Guide to requirements for collecting Australian plants and animals, available from Environment Australia.

4.4 FAUNA & FLORA

Field parties must consider potential hazards to personnel from flora or fauna likely to be encountered at the field work site. Personnel must be adequately briefed on these likely hazards, and appropriate protective clothing, work practices, and First Aid supplies must be available. eg. vinegar must be taken on all marine, mangrove and estuarine activities for first aid treatment of injuries from marine stingers. A summary of first aid treatment for snakebite, marine stings and injuries from stinging tree contact is provided in Appendix 5.
4.5 FIRST AID REQUIREMENTS

First aid equipment and facilities must be readily available for use by personnel in the field. Workers should also have access to trained first aid personnel. In meeting its obligations in this regard the University may adopt the Workplace Health and Safety (First Aid) Advisory Standard 1996 (James Cook University).

(a) A currently qualified First Aider is mandatory on field trips in locations where it takes more than half an hour to get medical aid to an injured or ill person.

(b) For remote area field work, a normal first aid kit (Appendix 7) may need to be augmented by additional contents (Appendix 8) such as a major trauma kit. The contents of a first aid kit should be determined after assessing likely illnesses and injuries that could be sustained during the particular field activity.

(c) Within a School the first aid kits should be under the control of a person with a Senior First Aid qualification. This person should be responsible for recommending actions regarding use, contents, modifications and maintenance of kits, checking and replenishing contents; and ensuring equipment and contents are within the “Use by” dates. Alternatively Schools may arrange to have first aid kits maintained by an external provider. A record should be kept of kit contents and maintenance.

(d) On a field trip the First Aider should be responsible for the kit and maintenance of its contents, and ensuring the availability of the kit whenever workers are at work.

(e) A first aid kit for field use should be in a dust proof, light, portable but robust box eg. a tackle box, and prominently marked with white cross on a green background. It should be stored carefully to minimise damage to contents during travel, but be readily accessible for use.

(f) A portable first aid kit in a bum-pack or backpack is recommended for field work involving travel on foot away from the vehicle or base camp.

(g) First Aiders are not trained to treat injuries and illnesses with medications. For this reason First Aid kits may not contain medications such as certain analgesics, eye drops, burn medication or cold and flu products unless so determined by risk assessment in consultation with a medical professional. The OIC should ensure that field trip participants are informed of this ruling, and advised to bring with them any medication that they may require. The OIC must also be informed of their requirements on the form

4.6 HEALTH

(a) Staff who participate in remote field work should be reasonably fit and have no existing uncontrolled medical conditions which could reasonably be expected to give rise to a life-threatening situation.

(b) Medication: If personnel are taking regular medication it is vital that adequate supplies are carried on trips eg. spare insulin or puffer.

(c) For undergraduate filed trips it is recommended that students complete the Field Trip Personal and Medical Form (Appendix 9).

(d) Personnel should make OIC aware of any medical condition that may require special consideration in planning.

(e) Manual Handling: Accidents arising from poor manual handling techniques, especially loading and unloading vehicles, are common in staff working on field trips. Personnel should ensure that they, and any persons they supervise, adopt correct manual handling techniques for the tasks to be performed in the field. Training in manual handling techniques is available through the Faculty Manager.

4.7 CLOTHING, SAFETY EQUIPMENT AND BEHAVIOUR

(a) The appropriate kind of safety equipment and clothing of an occupational nature for the field trip should be dictated by the hazards identified in the proposed field work, together with experience and common sense.

(b) Special items of safety equipment to ensure control of hazards and the workplace health and safety of employees and others at the workplace must be provided by the Head of School or funding body as part of their management and legal responsibility.

(c) For undergraduate field trips, safety directives must be given to the students in writing as well as verbally. These directives should be developed from the hazard identification and hazard control considerations of the activity. Essential elements of a field work safety induction are
(d) Students must be advised of their obligations under the Edith Cowan University Occupational Safety and Health Policy.
(e) Students who do not comply with the safety directives shall not be permitted to participate in the activity.

4.8 CAMP SITE AND CAMP REQUISITES

A campsite should be selected so as to be free from hazards such as falling branches, flash flooding, vehicular traffic, dangerous wildlife, and stock. Particular attention must be paid to hygiene, especially where a site is used as a base camp for an extended period. For personnel unfamiliar with camping, information should be available in camp siting, layout, sanitation, fire precautions and catering from the School Representative/Course Co-ordinator.

4.9 TRANSPORT

An appropriate type of vehicle, properly maintained and suitably equipped is to be supplied for field work:

(a) Normal sedans and station wagons are only suitable for bitumen and all weather dirt roads.
(b) Heavy-duty 4-wheel drive vehicles must be used for all off-road situations including mountainous terrain and desert areas.
(c) All 4-wheel drive vehicles used for field work shall be equipped with the following:
   ♦ a steel bull-bar;
   ♦ air-conditioning;
   ♦ electric winch;
   ♦ driving lights;
   ♦ long range fuel tanks.
(d) The following items are strongly recommended for inclusion as vehicle equipment:
   ♦ dual battery system;
   ♦ water tanks;
   ♦ high lift jack.
(e) Where vehicles are used off-road or in remote locations appropriate spare parts, tools and recovery equipment and adequate supplies of emergency rations must be carried. A comprehensive checklist of these items is provided in Appendix 10. Selected items are to be checked on the Field Trip Operational Details form prior to departure.
(f) Field work will be cancelled if a suitable vehicle is not available.
(g) Additional information relating to technical and mechanical aspects of vehicles and correct driving methods is available from the Officer-in-Charge, and is also contained in the 4-wheel drive vehicle training course booklet.
(h) **Utilities and Station Wagons.** Utilities are frequently used on field trips, and for example, have been used to carry personnel from base camp to field sites, and on transects during spotlighting activities. Carrying unrestrained personnel in the rear or outside of a vehicle presents a considerable hazard, and is illegal. Unrestrained cargo in the load space of a vehicle has the potential to cause fatal injury. For example, unrestrained rock samples and equipment could cause considerable injury to driver and passengers in the event of a vehicle suddenly stopping or rolling-over.
   ♦ The number of persons that can be legally carried in these vehicles is that number given on the vehicle registration certificate and refers to the seating capacity of the cab. The load space is for cargo and not for passengers. Personnel shall not be carried in the cargo space of utilities or station wagons.
   ♦ Cargo in utilities and station wagons must be restrained so that it cannot impede the driver’s view and control of the vehicle, and so that it will not fall from the vehicle eg. rock samples should be contained within a secured steel trunk or a metal cage.
   ♦ Passengers are not to be carried outside a vehicle. A person is deemed to be on the outside of a vehicle if the person is upon the hood, bonnet, mudguard, running board, bumper bar, roof, or luggage carrier of such a vehicle. Personnel shall not ride in a trailer or caravan while it is being towed.
(i) **Private vehicles** owned by undergraduate students are not permitted on a University field trip unless there are extenuating circumstances eg. that the student would be arriving late because of some unchangeable commitment such as work, or would for similar reasons...
have to depart the trip early. The prohibition on private vehicles is so that appropriate transport and supervision arrangements can be implemented to ensure effective hazard control and to facilitate communication during the trip. The final decision will rest with the Officer in Charge (OIC) of the field trip.

4.10 DRIVERS’ RESPONSIBILITIES

(a) Personnel driving vehicles during field work must:
♦ hold a relevant and current licence or international driving permit for each type of vehicle operated eg. car, bus, truck, boat, aeroplane etc.
♦ be trained in the use of such vehicles under relevant operating conditions,
♦ comply with the relevant government regulations.

(b) After receipt of the vehicle from the vehicle pool or School vehicle pool booking officer, the driver is responsible for all aspects of preparation, general maintenance of the vehicle and equipment during the trip, and the application and implementation of the guidelines provided in Appendix 11.

(c) A check of vehicle and towed appliance, viz.: boat, trailer, for general roadworthiness (towing linkages properly connected; lights functioning; gear stowed correctly) shall be made prior to departure and then a daily check of vehicles is to be carried out for:
♦ tyres (visually) for inflation and tread conditions;
♦ radiator for correct water level;
♦ oil level;
♦ battery condition

(d) Prior to setting off, obtain as much information as possible about the conditions that are likely to be encountered during the trip and make provision for them.

4.11 LIMITS ON DRIVING AND WORK TIME

Depending upon the nature of the field work, locality, work and driving conditions, Schools may need to limit the work and driving times of personnel. CSIRO and Federal Department of Transport recommendations for limits on work and driving times are provided in Appendix 11. The following specific guidelines should be observed:

(a) It is recommended that drivers travelling alone not exceed more than 3 hours of continuous driving without a driver-reviver break away from the vehicle of at least 20 minutes. Where driving is shared, it is recommended that drivers change over every 2 hours; note that recommendations differ for private vehicles, trucks and bus drivers (refer to Appendix 11);

(b) Cumulative driving time for any one driver should not exceed 8 hours in a 24-hour period. The total time spent travelling, including breaks, shall not exceed twelve hours, even when the driving is shared;

(c) Ordinary duties (which do not involve driving) combined with driving shall not exceed 12 hours in any 24 hour period;

(d) Alcohol shall not be consumed or drugs taken within 8 hours of, or during the period of the journey by any officer undertaking driving duties;

(e) The distance which can reasonably be covered during the space of a day’s driving will be governed by (a) above and driver fatigue, legal speed limits, climatic conditions, and type of vehicle used. The CSIRO recommendation is a maximum of 650 km travelled by a group in any one day.

4.12 CLIMATE, WEATHER, NAVIGATION, TIDES

Field personnel should make themselves aware of the climatic conditions, tidal information and weather events that can be encountered in the location, and obtain current weather forecasts on a regular basis whilst in the field.

For much of the year tropical regions experience hot and humid climatic conditions by day, and low temperatures inland at night. Personnel must be aware of heat exhaustion and heatstroke, and first aid advice for heat-related conditions is provided in Appendix 6.

Cyclones: Green Alert (Weather Bureau Cyclone Watch) when the Weather Bureau advises that a low pressure system has developed which could culminate in a cyclone that would affect the field work operational area. Field parties should consider whether to move to a secure
location eg. No field trips are to begin, nor camping equipment to be taken from stores during this period. Equipment from returning field trips must be secured in the appropriate stores or buildings.

Red Alert (Weather Bureau Cyclone Warning) when the Weather Bureau advises that a cyclone could affect the field work operational area. **All field work must be suspended and field parties move to a secure location.** All equipment from returning field trips must be secured in the appropriate stores or buildings.

Appropriate navigation aids should be provided for field parties. These may include appropriate large scaled maps and charts, aerial photographs, an accurate compass, and GPS (global positioning system) indicator.

4.13 FIREARMS

The use of firearms on field trips is subject to Police clearance and advice from the Risk Manager. ECU personnel who use firearms for University purposes must hold a current W.A. Firearms Licence and must be an approved and registered user. Basic firearm safety rules and requirements for transport of firearms are provided in Appendix 12. All information of activities, safe storage and ammunition must be recorded on the Field Trip form.

4.14 MECHANICAL, RADIATION, FIRE AND EXPLOSION RISKS, THERMAL, ELECTRICAL, AND CHEMICAL HAZARDS

Field work may entail the carriage and use of equipment and substances which may present a variety of hazards. For example drilling rigs, fuel, liquid nitrogen, electrofisher, radioisotopes, and preservatives. Where such hazards are identified, appropriate controls and safe work practices must be implemented. If chemicals are to be transported, personnel should check in well in advance of the field trip with the Occupational Safety and Health Manager. There are mandatory packaging requirements for certain volumes of certain substances. This is particularly important if chemicals or samples in dry ice or sea water are to be transported overseas and by air. Material Safety Data Sheets (MSDS) must be available for hazardous substances taken into the field.

4.15 URBAN FIELD WORK

Urban field work includes house-to-house surveys, home visits, and surveys in urban areas. Hazards can include vicious dogs, abusive and violent people, traffic etc. Training is given to psychology and sociology students undertaking home visits. Depending upon the nature of the field work, personnel may need to consider the availability of a mobile phone, assistance and medical aid.

4.16 OVERSEAS FIELD WORK

Field work outside of Australia may entail additional hazards, especially in developing countries. The hazards may include both infectious diseases (via drinking water, food, poor sanitation, insect and animal vectors etc.), and risk to personal security. The risk from these hazards may be amplified by the limited availability of:

♦ communication facilities,
♦ emergency services,
♦ medical and hospital facilities, particularly facilities for handling acute trauma emergencies
♦ transport and business facilities.

**Infectious Diseases.** Some 3 - 6 months prior to departure, field workers going overseas should undertake an evaluation of the infectious diseases prevalent in their proposed work locations and the recommended protective measures against such infections; including

♦ safety of local water and food,
♦ availability of local medical and hospital services.

Health Services Australia (phone (08) 9324 6444 or 1300 361 046) provides information on vaccinations, and an after hours recorded information service. Common infectious diseases in some overseas countries include malaria, cholera, typhoid, dengue fever, filariasis, rabies, plague, schistosomiasis, meningitis, yellow fever, Japanese encephalitis, trypanosomiasis, tetanus,
diphtheria, poliomyelitis, hepatitis A/B/C/D/E etc., HIV, and worm infections. Special consideration needs to be given for pregnant women and those at increased personal risk (eg. who have had a recent splenectomy).

Field workers going overseas should consult a doctor with experience in travel medicine (Medical Services Ext. 8442). The consultation should take place at least three months before departure to ensure adequate time for the completion of appropriate immunisations. Existing vaccinations such as tetanus should be kept up to date. Travellers’ Health and Vaccination advice is available on (1300) 658 844 or web site at http://www.tmvc.com.au.

**Personal Security.** Field workers going overseas should undertake an evaluation of the problems for their personal security and recommended practices to minimise such risks. Information may be available from your contacts in the field work country, experiences of previous field workers, and the current recommendations from the Commonwealth Department of Foreign Affairs and Trade published in *Hints for Australian Travellers* and *Travel Advisories* available at AFTA travel agents throughout Australia. Consular Advice is also available on-line from the Department of Foreign Affairs and Trade through http://www.dfat.gov.au.

University personnel working in institutions overseas should follow local and institutional workplace health and safety requirements with respect to their field work.

### 4.17 SMOKING

In accordance with University policy to provide a smoke-free workplace, smoking is prohibited in all vehicles and in shared places during field work activities. In all other circumstances smokers should consider the rights and comfort of non-smoking companions. In common with all activities involving the use of fire, smokers should take all due care with respect to the fire hazard.

### 4.18 ALCOHOL

Alcohol is a significant contributory factor in many accidents and acts of prejudicial conduct. Alcohol should not be consumed when undertaking field work. It should be appreciated that the field is a workplace and appropriate standards of workplace behaviour should be maintained.

It is recognised that some participants may choose to consume alcohol after work. It should be the individual’s responsibility to ensure he or she does not contravene acceptable standards of behaviour and is not affected by alcohol when next they undertake work.

Any unresolved disputes which arise concerning this issue should be referred to the Head of School.

### 4.19 SEXUAL HARASSMENT

Sexual harassment is an unacceptable form of behaviour. It should be appreciated that a field work site is a workplace and appropriate standards of workplace behaviour should be maintained including a persons’ right to work and study in an environment free from personal intimidation and harassment, Sexual harassment is unlawful in that it is a contravention of the Commonwealth Sex Discrimination Act 1984. The Act state that “a person must not sexually harass another person”. As an educational institution and as an employer, the University has a responsibility to provide an environment for work and study free from sexual harassment.

*Actions which constitute sexual harassment include:*

- sexual assault, physical molestation
- indecent exposure, unwanted touching, comments by words or gestures about another persons’ physical appearance (this can include wolf whistling)
- comments or questions about another person’s private relationship or sexual conduct
- belittling comments based on sex role stereotypes
- smutty jokes and comments
- persistent invitations
- displays of sexually graphic or offensive material
- requests for sexual favours in exchange for benefits or with the threat of detriment for non-compliance.

The University has trained Discrimination Advisers. An Adviser should be consulted if a person
considers that they are being sexually harassed. Edith Cowan University Policy on Prevention of Harassment and Guidelines for the Resolution of Reported Complaints at http://www.ecu.edu.au/GPPS/policy/hr/hr013.php

5. ACKNOWLEDGMENTS

The University gratefully acknowledges policy advice from workplace health and safety units of the James Cook University, Australian National University, the Queensland University of Technology, the University of New South Wales, and University of Western Australia.

6. BIBLIOGRAPHY AND SOURCES OF INFORMATION

ECU Publications
Dive Operations Manual
Boat safety
First Aid Policy

Australian Standards
AS 2299: 1992 Occupational Diving
AS3001: 1990 Electrical installations - movable premises (including caravans) and their site installations.
AS 3005: 1982 Electrical installations of tents similar temporary structures.
AS 2865-1995: Safe working in a confined space.

Dangerous Goods

Fauna and Flora

First Aid
Remote Area First Aid. St John Ambulance. 1991
Australian Red Cross First Aid. Australian Red Cross. 1995

Firearm Safety
ECU Policy on Firearms - purchase, storage and use.(to be developed in the future)

General Field Work
Bushcraft and Survival Handbook. Western Australian Police Academy Publication. 15th, ed.
Four Wheel Drive Training Course Notes. University of Western Australia.
Map Reading Handbook. Emergency Services, Tasmania.

James Cook University Publications
JCU Boating Safety Rules
JCU Diving Operations Manual
Legislation
Occupational Safety and Health Act 1984.
Workers’ Compensation and Rehabilitation Act 1981.
Queensland Workplace Health and Safety (Advisory Standards) Amendment Notice (No. 3) 1996.
Advisory Standard for First Aid.

Overseas Field Work
Health Information for International Travel. AGPS Canberra. 4th ed. 1994.
Consular Advice is available on-line from the Department of Foreign Affairs and Trade through http://www.dfat.gov.au.
Travellers’ Health and Vaccination advice is available on (1300) 655 565.

7. APPENDICES
1. Operational Details Form (Terrestrial and Freshwater activities)
2. Marine Field Trip Operational Details Form
3. Hazard Identification and Control checklist
4. Field work health and safety induction - essential elements
5. Snake bit, jellyfish stings and stinging tree contact injuries
   - a summary of first aid
6. First Aid treatment for heat exhaustion and heat stroke
7. First Aid kit contents
8. Additional contents of a First Aid kit fend Major Trauma kit
   for remote locations
9. Field trip personal and medical form
10. Vehicle spare parts and equipment checklist
11. Recommended limits on driving and work time

6. Contact Information

Contact Person: Chair, Faculty of Computing, Health and Science
Occupational Safety and Health Committee
Telephone: 5710 Facsimile: 5811
Email: s.hinckley@ecu.edu.au
APPENDIX 1

FIELD TRIP OPERATIONAL DETAILS
(Form must be submitted to your School Representative/Unit Coordinator prior to departure on terrestrial or fresh water field trips)

Project Title: ____________________________________________________________

Officer in Charge: ___________________________ Position: Staff ❑ UG student ❑ PG student ❑

Proposed Dates of Trip: From / / To / /

Location of proposed field work (attach photocopy of map of work areas if available and indicate most likely work areas and camp sites):

________________________________________________________________________

Describe purpose of trip and principal work methods to be used ____________________________________________________________

________________________________________________________________________

Has the Hazard Identification and Control form (attached) been completed by the OIC? Yes ❑ No ❑

PERSONNEL (includes every person on the trip. Attach additional sheet if necessary)

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Next of Kin</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Status: L=Leader; D=Dover; S = University Staff; UG=Undergraduate; PG =Postgraduate; V = Volunteer; O=Other....... C = Communications operator; F = First Aider - First Aider is mandatory for remote area field trips that are in areas where it takes more than a half hour to get medical aid to an ill or injured person.

DEPARTMENTAL REPRESENTATIVE/UNIT COORDINATOR’S FIELD TRIP ASSESSMENT

Is field trip documentation complete? Yes ❑ No ❑ Form returned to OIC ❑

Are proposed control measures appropriate for the hazards identified? Yes ❑ No ❑

If "No", then what additional control measures are required? __________________________

________________________________________________________________________

Assessed: ______________________ on / / Approved: ______________________ on / /

School Representative/ Unit Coordinator Head of School

As OIC I understand my responsibilities as outlined in the ECU Policy on Field work. I have undertaken to personally check the safety equipment and safety procedures required for this field trip.

OIC Name __________________________ Signature ___________________________ Date / /
**TRANSPORTATION DETAILS**

(Provide all details)

<table>
<thead>
<tr>
<th>Vehicle (Make, model, type)</th>
<th>Rego. No.</th>
<th>Transport Co. (incl. phone no.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If vehicle is a four-wheel drive, has the driver completed ECU 4WD training course? Yes ❏ No ❏

**COMMUNICATION SYSTEMS TO BE USED (tick)**

- ❏ Mobile Telephone: Phone Number: (    ) ______________
- ❏ Other (Describe) ______________
- ❏ Radio Communication ❏ Emergency Position Indicating Radio Beacon (EPIRB) No. ______________

If Radio: Radio Type: UHF/VHF ❏ MF/HF ❏ 27 MHz ❏ Call Sign: ______________

Frequency or channel number: ______________ Radio Schedules (times) ______________

With Whom (incl. address and phone no.) ______________

Pre-trip training/instruction in communication procedures for personnel completed Yes ❏ No ❏

How can the field party be contacted in an emergency? ______________

How often: ______________ Times: ______________

ECU Contact After Hours: ______________ Phone: ______________

Authorised Officer: ______________ Phone: ______________

Address: ______________

Search and Rescue shall be initiated if the field party fails to return by ___(time) on _____(date)

**SAFETY EQUIPMENT**: Tick safety equipment carried and indicate number where applicable:

**PERSONAL PROTECTIVE EQUIPMENT**

- ❏ Hat ❏ Clothing ❏ Footwear ❏ Sunscreen ❏ Other ______________

**CAMPING**

- ❏ Tents (No. and size) ______________
- ❏ Water drums (   x   L)
- ❏ Food (for how long) ______________
- ❏ First aid kit ❏ Portable generator
- ❏ Communications equipment ❏ GPS

**VEHICLE**

- ❏ Spare tyres ❏ Water (   L) ❏ Tools (vehicles, other) ❏ Spare fuel (   L)
- ❏ Winch ❏ First aid kit ❏ Radio ❏ GPS
- ❏ Spare battery ❏ Spare parts (detail) ______________

**BOATING** (Fresh water, if applicable)

- ❏ Fuel Drums (   x   L) ❏ Spare parts ❏ V Sheet* ❏ Flares*
- ❏ Torch* ❏ Mirror* ❏ Water* ❏ Oars x 2
- ❏ Anchor plus rope* ❏ Anchor rope > 28m ❏ Lifejackets:* number ❏ Tools
- ❏ Spare propeller ❏ Demoisturising fluid ❏ EPIRB ❏ Auxiliary motor
- ❏ First aid kit ❏ Radio ❏ Charts* ❏ GPS
- ❏ Compass* ❏ 2 x 91 buckets ea. with 2m lanyard* *Legally required for open water boating.
APPENDIX 2

MARINE FIELD TRIP OPERATIONAL DETAILS

1. Project Title: ____________________________________________________________

2. Officer-in-Charge: __________________________________________ ph. __________

3. Supervisor: __________________________________________ ph. __________

4. Brief Description of the project and principal work methods:
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

5. Location of field work: _____________________________________________

6. Latitude & Longitude of study sites: ___________________________

7. Is the field work likely to:
   (a) be in a remote* location(s) or involve the use of a boat?  ☐ Yes (Complete Section A) ☐ No
   (b) involve diving (snorkelling or SCUBA)?  ☐ Yes (Complete Section A & B) ☐ No

If you answered “No” to (a) and (b) above, sign the bottom of the form and obtain your supervisor’s signature (if appropriate)

---

Section A. Field Trip Operations

<table>
<thead>
<tr>
<th>Proposed No. of: (a) field trips/year</th>
<th>(b) days per trip</th>
<th>(c) people per trip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance to outside assistance</th>
<th>km</th>
<th>hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Means of contact while in the field:

<table>
<thead>
<tr>
<th>Next of kin:</th>
<th>ph.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Qualifications/Experience: (attached photocopies of relevant qualifications)

| First Aid training | ☐ Yes | ☐ No |
|                   |      |      |
| WA speed boat licence | ☐ Yes | ☐ No |

Emergency contact numbers: (enter “n.a.” if not appropriate)

<table>
<thead>
<tr>
<th>Radio channels</th>
<th>Mobile phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air unit</th>
<th>WA Emergency Services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ambulance</th>
<th>Police</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nearest hyperbaric chamber</th>
<th>Coast Guard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Doctor trained in Diving Medicine</th>
<th>DES/DAN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section B. Diving Operations (to be completed if you answered “yes” to 7(c) above

<table>
<thead>
<tr>
<th>Proposed No. of dives per day</th>
<th>Working depth</th>
<th>m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of exertion (high/medium/low)</th>
<th>Maximum depth m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Major risks?</th>
<th>Tables used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Diving Qualifications/Experience (attached photocopies of relevant qualifications)

Details of diving qualifications

<table>
<thead>
<tr>
<th>Approx. number of dives at</th>
<th>(a) 0-10 m</th>
<th>(b) 10-20 m</th>
<th>(c) &gt; 20 m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Oxygen training | ☐ Yes | ☐ No |
|                |      |      |
| Rescue training | ☐ Yes | ☐ No | ☐ Yes | ☐ No |

Have you ever been involved in a diving accident? (if “Yes”, give details)  ☐ Yes ☐ No

Signed: ________________________ Supervisor: _____________________ H.O.D.: __________________

Date: ________________________ Date: ________________________ Date: ________________________

“Remote” is defined as a travel of 30 minutes for medical aid to reach an injured person.
APPENDIX 3

HAZARD IDENTIFICATION

- manual handling, lifting
- striking and grasping
- slips and trips
- mental stress
- personal security & safety
- medical conditions?

Field work party
- size
- composition
- novice/experienced
- fitness
- medical conditions

Field work activities at the site
- urban survey
- bushwalking, traverse on foot
- abseiling
- rock/tree climbing
- working at height
- sample collecting
- underground work, caving
- diving (refer to Diving SO)
- boating

Field work party
- personal security & safety
- size

Fire and Explosion
- medical conditions?
- composition
- flammable substances
- explosives

Thermal hazards
- medical conditions
- falling tree branches
- cryogenic fluids
- flash flooding

Field work activities at the site
- safe from wildlife

Electrical
- urban survey
- safe from vehicles
- high voltage equipment eg. electrofisher
- 240v electrical equipment

Chemicals/Hazardous Substances
- sample collecting
- potable water and food
- carcinogens, genotoxins (mutagens, teratogens)
- underground work, caving
- cooking facilities
- LP gas arrangements
- solvents
- MSDS available
- dangerous goods transport

Etiquette requirements
- bush etiquette
- native etiquette
- collecting permits
- permission to enter private land

Fauna & Flora
- box jellyfish, etc
- stonefish, etc
- crocodiles, sharks, etc
- wild pigs, cattle, etc.
- snakes
- bats (vaccinations?)
- spiders, ticks, leeches, etc
- allergens
- zoonoses
- handling of small animals
- handling of large animals
- harmful plant contacts (sap. stinging hairs)

First Aid requirements
- first aider
- kit in transport
- portable kit
- additional items required?

Clothing
- hat
- shirt
- trousers/overalls
- footwear

Personal protective equipment
- gloves
- goggles
- face masks
- respirator
- harness
- helmet

Personal
- sunburn
- heat stress
- cold stress

Radiation hazards
- ionising - sealed/unsealed source
- laser
- radiofrequency

Fire and Explosion
- flammable substances
- explosives

Thermal hazards
- cryogenic fluids

Electrical
- high voltage equipment eg. electrofisher
- 240v electrical equipment

Chemicals/Hazardous Substances
- carcinogens, genotoxins (mutagens, teratogens)
- sensitising agents
- corrosive agents
- irritants
- toxic/harmful substances (poisons)
- solvents
- MSDS available
- dangerous goods transport

Urban
- urban dogs
- hostile or violent persons

Overseas field work
- disease
- vaccinations
- political climate

Other
- Specify

Complete the Risk Control section of this form overleaf.

First Aid requirements
- with locals
- with authorised officer

Tides and Weather
- tide date
- Met Bureau forecasts
- radio broadcasts
- cyclone warnings

Navigation
- route selection
- location determination
- direction determination

Communication
- between participants
- with locals
- with authorised officer

Fire Risks
- extinguisher

Firearms
- safe storage
- ammunition

Mechanical hazards
- vehicles
- machinery, equipment in motion
- vibration
- pressure equipment
- generation of dust

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Document Owner: Chair, CHS OSH Committee
RISK CONTROL*

One method of evaluating risks is to use a risk assessment chart:

<table>
<thead>
<tr>
<th>CONSEQUENCE</th>
<th>LIKELIHOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very likely</td>
</tr>
<tr>
<td>Fatality</td>
<td>High</td>
</tr>
<tr>
<td>Major injuries</td>
<td>High</td>
</tr>
<tr>
<td>Minor injuries</td>
<td>High</td>
</tr>
<tr>
<td>Negligible injuries</td>
<td>Medium</td>
</tr>
</tbody>
</table>

What you should do:

1. List in the following table ** the HAZARDS you have identified that are associated with the field activities.
2. Briefly describe in the table the risks associated with each hazard.
3. Using the risk assessment chart assess, and record in the table the risk presented by that hazard (HIGH, MEDIUM, LOW).
4. Address risks with a HIGH rating first.
5. In the table indicate what control measures are being taken to minimise the risk.

Control Measures

- ELIMINATE the hazard
- SUBSTITUTE something with a lesser risk eg. manual handling - substitute a smaller container
- ISOLATE THE HAZARD EG. PROPER STORAGE OF CHEMICALS OR FIREARM
- Use ADMINISTRATIVE CONTROLS - provide training, adequate supervision
- Provide PERSONAL PROTECTIVE EQUIPMENT eg. gloves, safety boots, sunhat, sunscreen.

Controls should be selected from as high up on this list as is reasonably practical to maximise effectiveness. In many cases a combination of controls may be necessary to reduce the hazard.


<table>
<thead>
<tr>
<th>Description of Hazard</th>
<th>Description of Risk</th>
<th>Assessed Risk</th>
<th>Risk Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>box jellyfish sting</td>
<td>wading waist deep in sea whilst dragging net (during February)</td>
<td>high</td>
<td>wear stinger suit; have 2 litres vinegar with first aid kit; first aider present; assistant briefed on hazard.</td>
</tr>
<tr>
<td>manual handling - back strain/sprain</td>
<td>lifting field gear in and out from the back of vehicle</td>
<td>medium</td>
<td>pack gear into easily lifted containers; team lift heavy items; revise correct lifting technique</td>
</tr>
</tbody>
</table>

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Field Work Safety Induction Information

All personnel undertaking particular field trip/work for the first time shall be given a safety induction by the officer-in-charge. Undergraduate students shall be provided with this information verbally, and in writing eg. as part of the class notes or a copy for the relevant field safety handbook.

The induction shall include:

- Information on the nature and objectives of the field work
- An overview of the parts of the University Policy for Field work Health and Safety relevant to the particular field work, and reference to the relevant field safety handbook
- Safety obligations of personnel
- Information on suitable clothing and behaviour
- Hazards from flora and fauna (Appendix 5 page 21 and heat-related illnesses (Appendix 6 page 22)
- Other identified hazards
- The risks associated with these hazards, and the
- Proposed control measures
- Where to access first aid facilities and who is the first aider on the project
- Instruction in the safe operation of any equipment to be used
- Instruction the correct use and maintenance of any personal protective equipment to be used
- Reporting accidents and illnesses
- Communications procedures
- When-lost procedures (Appendix 4 see page 19)
- Emergency procedures.
WHEN LOST PROCEDURES

The following information is taken from *Stay Alive - a handbook on survival* Chapter 6, Dunlevy, 1981.

- If you do get lost, don’t panic - sit down and think.
- Examine your map if you have one - can you recognise any landmarks?
- What was the last one you saw?
- Get out your sketch map. Compare the two. Is the map in error?
- If not ask yourself whether you have drifted to the right or left, or whether you have passed your objective.
- Did you walk around an obstacle and fail to take account of it?
- Do you have a record of the distance you have travelled?
- Try to reconstruct the course you took since the last known landmark.
- Climb a tree or hill and look around.

If you are really lost

- Stay where you are.
- Try to make yourself and your camp easily visible.
- Brightly coloured garments, groundsheet or coloured plastic may help, so may signals in the sand, if there is sand.
- Light a fire and keep it smoking.
- Be prepared to signal to rescuers - remember if there is a search for you it may be conducted by ground and air (see diagrams below).
- Conserve your water, your food and energy.
- Do not blunder about
- Should you decide to walk out, leave plenty of evidence that you were there and indicate where you are going next, and the physical condition of members of the party.

SEARCH & RESCUE SIGNALS

*Ground-air visual code for use by survivors*

<table>
<thead>
<tr>
<th>Message</th>
<th>Code Symbol</th>
<th>Message</th>
<th>Code Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require doctor serious injuries</td>
<td></td>
<td>Probably safe to land here</td>
<td>▲</td>
</tr>
<tr>
<td>Require medical supplies</td>
<td></td>
<td>Require fuel and oil</td>
<td>L</td>
</tr>
<tr>
<td>Unable to proceed</td>
<td>X</td>
<td>All well</td>
<td>L L</td>
</tr>
<tr>
<td>Require food and water</td>
<td>F</td>
<td>No</td>
<td>N</td>
</tr>
<tr>
<td>Indicate direction to proceed</td>
<td>K</td>
<td>Yes</td>
<td>Y</td>
</tr>
<tr>
<td>Am proceeding in this direction</td>
<td>▲</td>
<td>Not understood</td>
<td>J L</td>
</tr>
<tr>
<td>If in doubt use international symbol</td>
<td>SOS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Field Work Health and Safety Procedure Version 1.0
Document Owner: Chair, CHS OSH Committee
Ground-air visual code for use by ground search parties

<table>
<thead>
<tr>
<th>Message</th>
<th>Code Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation completed</td>
<td>L L L</td>
</tr>
<tr>
<td>We have found all personnel</td>
<td>L L</td>
</tr>
<tr>
<td>We have found only some personnel</td>
<td>+ +</td>
</tr>
<tr>
<td>We are not able to continue. Returning to base</td>
<td>X X</td>
</tr>
<tr>
<td>Have divided into two groups each proceeding in direction indicated</td>
<td></td>
</tr>
<tr>
<td>Information received that aircraft is in this direction</td>
<td></td>
</tr>
<tr>
<td>Nothing found. Will continue search</td>
<td>N N</td>
</tr>
</tbody>
</table>

Standard aircraft acknowledgments

**Message received and understood:** Aircraft will indicate that ground signals have been seen and understood by, in day or moonlight, rocking from side to side; at night, making green flashes with signal lamp.

**Message received and not understood:** Aircraft will indicate that ground signals have been seen but not understood by, in day or moonlight, making a complete righthand circle; at night, making red flashes with a signal lamp.
Field workers should familiarise themselves with the full account of first aid treatment for these animal stinging injuries which is provided in the publication *Australian Red Cross. First Aid* ...............  

**First Aid for snake bite**
1. Use the pressure immobilisation technique for a bite on a limb.  
2. Continually monitor the airway, breathing and circulation and be prepared to give EAR or CPR if needed.  
3. Keep the victim calm, reassured and at total rest.  
4. Call an ambulance or in an isolated area transport the victim to a medical facility immediately. Antivenin is available for most poisonous snake bites.  
5. *Do not* cut the bite or try to drain the venom, *do not* suck or wash the bite, and *do not* apply a tourniquet.

**First Aid for Jellyfish stings in North Queensland**
1. Prevent the victim from rubbing the stung area.  
2. Keep the victim calm, at rest, and reassured.  
3. Pour vinegar over the stung area (to inactivate the stinging capsules and prevent more envenomation).  
4. Use an ice-pack or compress the site to relieve pain. If pain continues after 15 minutes, apply another ice-pack.  
5. For the stings of Irukundji and box jellyfish, use the pressure immobilisation technique after applying vinegar.  
6. Monitor the victim’s airway, breathing and circulation and call an ambulance or in an isolated area transport the victim to a medical facility immediately. There is an antivenom for box jellyfish stings.  
7. Be prepared to give EAR or CPR if needed, and continue until help is available. Sometimes this may be for several hours, although there is still a chance of complete recovery.

**First Aid for injuries resulting from contact with Stinging trees**
1. Apply wax strips ** to the affected area. Carefully pull off the wax strip (as per instructions) to remove the plant hairs. Repeat this treatment until most of the hairs are removed. If the wax strips are unavailable use adhesive plaster, or shave the affected area. It is important to remove as many hairs as possible.  
2. The application of vinegar over the stung area (to inactivate the stinging capsules and prevent more envenomation).  
3. Victims who experience a severe sting may exhibit signs of shock arising from the severe pain experienced. In such cases treat the victim for shock then treat the affected area.  
4. The application of EURAX cream may further reduce the effects of a stinging tree contact. Where there is a possibility of encountering stinging trees during field activities, EURAX cream (an S2 item) should be carried in First Aid kits, so that victims can administer the EURAX to themselves should this be necessary.

* Australia Red Cross. First Aid (Queensland Ambulance Service) 1995.  
** Hair remover wax strips (eg. *Mariana* wax strips, *Nair Easiwax*). Available from chemist shops in packs of 6 - 20 strips. Strips are ready to use immediately; no heating is required. The wax is water soluble.
APPENDIX 6

FIRST AID TREATMENT FOR HEAT EXHAUSTION AND HEAT STROKE

Heat-related illness is an inherent hazard of field work in the tropics. Field workers should familiarise themselves with the first aid treatment for heat-related illness as follows*

* Australian Red Cross. First Aid.

Heat exhaustion

Heat exhaustion is the common form of heat-related illness. It typically occurs after long periods of strenuous exercise or work in a hot environment. Although heat exhaustion is commonly associated with athletes, it also affects field workers, and those who wear heavy clothing in a hot, humid environment.

Heat exhaustion is an early indication that the body’s temperature-regulating mechanism is becoming overwhelmed. The victim loses fluid through sweating, which decreases the blood volume. Blood flow to the skin increases reducing blood flow to the vital organs. Because the circulatory system is affected the person develops mild shock.

The symptoms and signs of heat exhaustion include: normal or below normal skin temperature; cool, moist, pale skin progressing to red skin; headache; nausea; dizziness and weakness; exhaustion; sweating; rapid, weak pulse.

Heat exhaustion in its early stage can usually be reversed with prompt care. Often the victim feels better after resting in a cool place and drinking cool water. If heat exhaustion progresses, however, the victim’s condition worsens. The body temperature continues to climb and the victim may vomit and begin to show changes in the level of consciousness.

Care for heat exhaustion

1. Encourage the victim to rest lying down with the legs slightly raised. Loosen any tight clothing.
2. If fully conscious, give small drinks of cold water. If the victim is vomiting and unable to take any fluids, arrange for urgent medical treatment.
3. If unconscious, position the victim on the side and care for the airway, breathing and circulation.

Heat stroke

Heat stroke is the least common and most severe heat emergency. Heat stroke develops when the body systems are overwhelmed by heat and begin to stop functioning. Sweating stops because body fluid levels are low. When sweating stops, the body cannot cool itself effectively, and body temperature rapidly rises. It soon reaches a level at which the brain and other vital organs, such as the heart and kidneys, begin to fail. If the body is not cooled, convulsions, unconsciousness and death will result.

Heat stroke is a serious medical emergency. You must recognise the signs of the heat-related illness and provide care immediately. The signs of heat stroke include: high body temperature (often as high as 40°C); red, hot, dry skin; progressive deterioration in the conscious state; full, bounding pulse; rapid, shallow, noisy breathing.

Someone with heat stroke may at first have a strong, rapid pulse, as the heart works hard to rid the body of heat by dilating blood vessels and sending more blood to the skin. As consciousness deteriorates, the circulatory system begins to fail and the pulse becomes weak and irregular. Without prompt care, the heat stroke victim will die.
Caring for heat-stroke

When any symptoms and signs of sudden illness develop and you suspect the illness is caused by overexposure to heat, follow these general care steps immediately:

1. Stop the person from continuing any activity.
2. Cool the body.
3. Give cool, clear fluids if the victim is fully conscious.
5. Seek urgent medical care.

When you recognise heat-related illness in its early stages, you can usually reverse it. Remove the victim from the hot environment and give the victim frequent drinks of cool water. Moving the victim out of the sun or away from the heat allows the body’s own temperature-regulating mechanism to recover, cooling the body more quickly. Remember, it is important that the victim be persuaded to stop all activity as the person may be beyond the point of making a rational decision.

Loosen any tight clothing and remove clothing soaked with perspiration. Apply cool, wet cloths, such as towels or sheets, to the skin and fan the victim to increase evaporation. Continue cooling the victim until the body temperature falls to 38°C.

If the victim is conscious, drinking cool water slowly will help replenish the vital fluids lost through sweating. The victim is likely to be nauseated, and water is less likely than other fluids to cause vomiting and is more quickly absorbed into the body from the stomach. Do not let the victim drink too quickly. Give half a glass (100 ml) about every 15 minutes. Let the victim rest in a comfortable position, and watch carefully for changes in the victim's condition. A victim of heat-related illness should not resume normal activities the same day.

When to seek medical attention

Refusing water, vomiting and changes in the victim's conscious state are signs that the victim's condition is worsening. Call an ambulance immediately or in an isolated area transport the victim to a medical facility immediately. If the person vomits, stop giving fluids and position the victim on the side. Make sure the airway is clear. Monitor the airway, breathing and circulation and check vital signs. Keep the victim lying down and continue to cool the body.

A change in the conscious state is the first reliable sign that a victim's condition is deteriorating. If you observe changes in the conscious state, cool the body by any means available. Soak towels or sheets and apply them to the victim's body. If you have ice packs or cold packs, place them on each of the victim's wrists and ankles, on the groin, each armpit and on the neck to cool the large blood vessels. Do not apply rubbing alcohol, which closes the skin's pores and prevents heat loss. Maintain an open airway and monitor the airway, breathing and circulation. Immersing the victim in cool water is not a good idea because doing so may cause additional problems, including abnormal heart rhythms. A person with heat stroke may experience respiratory or cardiac arrest. Be prepared to give EAR or CPR.

Summary of first aid treatment for heat-related illness

- Monitor the victim's condition for signs of deterioration.
- Loosen tight clothing.
- Remove perspiration-soaked clothing.
- Apply cool, wet cloths to skin, and fan the victim.
- Monitor the condition carefully.
- Call an ambulance, or in an isolated area transport the victim to a medical facility immediately.
- Cool the body by any means available: wet towels or sheets or ice packs to armpits and/or groins.
- Monitor the Airway, Breathing, Circulation.
- Be prepared to perform EAR or CPR.
APPENDIX 7

SUGGESTED CONTENTS OF A FIRST AID KIT FOR A SMALL SIZED WORKPLACE

Preference is for all items to be disposable where possible.

<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>USE/FUNCTION/COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>adhesive strips (assorted sizes)</td>
<td>minor wound dressing</td>
</tr>
<tr>
<td>non-allergenic adhesive tape (eg. 5 m x 2.5 cm)</td>
<td>secure dressings, strapping</td>
</tr>
<tr>
<td>eye pads (eg. 5 single packs)</td>
<td>emergency eye cover</td>
</tr>
<tr>
<td>triangular bandage (eg. 2)</td>
<td>slings, support padding</td>
</tr>
<tr>
<td>hospital crepe or conforming bandage</td>
<td>retain dressings (heavier crepe bandages for various sizes eg. 2.5 cm - 10 cm] sprains may also be required)</td>
</tr>
<tr>
<td>wound/combine dressing (assorted sizes)</td>
<td>bleeding control, cover wound</td>
</tr>
<tr>
<td>non-adhesive dressings (assorted sizes)</td>
<td>wound dressing</td>
</tr>
<tr>
<td>safety pins (eg. packet of 10)</td>
<td>secure bandage, slings</td>
</tr>
<tr>
<td>scissors (eg. stainless steel sharp/blunt type 12.5 cm)</td>
<td>cutting dressings, clothing</td>
</tr>
<tr>
<td>kidney dish</td>
<td>holds dressings, instruments (where reusable, clean and disinfect after use)</td>
</tr>
<tr>
<td>small dressings bowl</td>
<td>holds liquids eg., antiseptic solutions (where reusable, clean and disinfect after use)</td>
</tr>
<tr>
<td>gauze squares (eg. 2 packets)</td>
<td>wound cleaning</td>
</tr>
<tr>
<td>forceps/tweezers or needle</td>
<td>remove foreign bodies eg. splinters</td>
</tr>
<tr>
<td>(preferably disposable splinter type 12.5 cm)</td>
<td>(where reusable, clean and sterilise after use)</td>
</tr>
<tr>
<td>disposable latex or vinyl gloves (eg. box of 10)</td>
<td>infection control</td>
</tr>
<tr>
<td>sharps disposal container</td>
<td>to be used by qualified personnel for resuscitation purposes</td>
</tr>
<tr>
<td>(eg. 1 bottle 250ml, or single use ampoules 30ml)</td>
<td>(once opened contents MUST be discarded)</td>
</tr>
<tr>
<td>sterile saline/water</td>
<td>emergency eye wash - irrigating eye wounds</td>
</tr>
<tr>
<td>resuscitation mask</td>
<td>pre-measured containers with expiry dates, low use - single packs</td>
</tr>
<tr>
<td>antiseptic solution (eg. 30ml)</td>
<td>infection control - disposal purposes</td>
</tr>
<tr>
<td>plastic bags (eg. 12 medium size)</td>
<td>waste disposal</td>
</tr>
<tr>
<td>note pad and pencil (and accident report forms)</td>
<td>recording the injured or ill person’s condition and treatment given</td>
</tr>
<tr>
<td>re-useable ice-pack</td>
<td>for treatment of strains, sprains and bruises.</td>
</tr>
</tbody>
</table>

Other items suggested for inclusion in a field first aid kit are:

- Hydrocolloid wound dressings which are waterproof and can be left on for some days.
- Pre-packed sterile dressings for minor cuts, grazes and burns eg. Cutifilm, Cutiplast, Cutinova, available from chemists shops.

Vinegar (2 litres) must be taken on all marine field activities. This includes field work in mangroves and estuaries. All vessels must carry a first aid kit, and in addition 2 litres of vinegar if used for marine operations.

The above contents are suggested for a small workplace (less than 30 workers), where the risk of injury or illness is low. The bracketed numbers are for guidance only and NOT represent minimum requirements. The actual quantity of particular items and contents of the kit SHOULD be determined by the Risk Assessment for First Aid requirements undertaken for particular field work.
# SUGGESTED ADDITIONAL CONTENTS FOR A FIRST AID KIT AND A MAJOR TRAUMA KIT FOR REMOTE LOCATIONS

<table>
<thead>
<tr>
<th>Type of hazards</th>
<th>Additional contents</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>distance from medical assistance</td>
<td>heavy smooth crepe roller bandages, 10 cm</td>
<td>for snakebites <em>(sufficient number for bandaging lower limbs)</em></td>
</tr>
<tr>
<td></td>
<td>splint</td>
<td>for snakebites and fractures <em>(to immobilise limbs)</em></td>
</tr>
<tr>
<td></td>
<td>vinegar (2 litres)</td>
<td>for box jellyfish stings</td>
</tr>
<tr>
<td></td>
<td>large burns sheet</td>
<td>for covering burn areas</td>
</tr>
<tr>
<td></td>
<td>thermal/emergency blanket</td>
<td>for treatment of shock <em>(also for assisting portability)</em></td>
</tr>
<tr>
<td></td>
<td>cold water supply and clean sheeting</td>
<td>for cooling and dressing of burns</td>
</tr>
<tr>
<td></td>
<td>first aid text</td>
<td>emergency reference manual</td>
</tr>
<tr>
<td></td>
<td>torch/flashlight</td>
<td>for use at night, attracting attention</td>
</tr>
<tr>
<td></td>
<td>note pad and pencil</td>
<td>for recording the injured or ill person’s condition, and treatment given</td>
</tr>
<tr>
<td>rainforest field work</td>
<td>hair remover wax strips</td>
<td>treatment of stinging tree contact</td>
</tr>
<tr>
<td></td>
<td>vinegar</td>
<td>treatment of stinging tree contact</td>
</tr>
<tr>
<td></td>
<td>EURAX ointment (S2)</td>
<td>treatment of stinging tree contact</td>
</tr>
</tbody>
</table>

In addition, it may be worthwhile considering a major trauma kit for a remote location:

## Suggested contents for a Major Trauma Kit

**Item** *(quantity)*
- Universal Dressing large (2)
- Conforming Bandage 15 cm (2)
- Conforming Bandage 10 cm (2)
- Scissors (1)
- Adhesive Tape 2.5 cm (1)
- Safety Pins (pkt of 6)
- Non-adherent Burn Dressing small (1)
- Thermal Accident Blanket (1)
- Foil Dressing for Sucking Chest Wounds 10 cm x 10 cm (1)
- Combine Pads 9 cm x 10 cm (2)
- Adhesive Plaster Strips (6)
- Triangular Bandage (1)
- Eye Pads Sterile (2)
- Disposal Gloves (1 pair)

*(A Major Trauma Kit is available from St. John Ambulance Code 6001)*

The above additional items for including in a first aid kit are guidelines only.
ACKNOWLEDGMENT OF FIELD TRIP INDUCTION

I hereby acknowledge that I have been informed of the nature of the field trip specified above and I am aware that participation of field work may require extensive work in remote areas, long, strenuous hikes and/or long periods of time outdoors in tropical conditions recording field data.

I accept full responsibility for my own behaviour and actions while on the field trip.

I agree to take all reasonable precautions to avoid hazards and I also agree to conform to all reasonable requests by the staff member in charge of the field trip. I understand my obligations to follow safety directives.

I am aware that it may be essential for people other than myself to know about conditions which pertain to me, and that any information I provide to the staff member-in-charge of the field trip will be treated with the strictest confidence and not disclosed to anyone without my consent, except in the case of a medical emergency.

I am aware that the field trip first aid facilities do not include provision of medications such as analgesics, antihistamines, Ventolin, insulin etc.

Name (and student number if applicable) please print   Signed

Please specify the following:

Name, address and phone number of person to be contacted in the event of an accident:

_________________________________________  Phone:   _________________________

Contact the ECU Student Guild for information relating to insurance cover for students on field trips.
APPENDIX 10

CHECKLIST OF VEHICLE SPARE PARTS AND EQUIPMENT THAT MAY BE REQUIRED ON A REMOTE AREA FIELD TRIP

Items currently provided by the ECU vehicle maintenance section are indicated*

Other items, may have to be provided by the School.

**Items for both Petrol & Diesel Engines**
- Drive belts (eg. fan & power steering belts etc.)
- Radiator and heater hoses
- Oil Filter
- Fuel filter
- Brake
- Wire
- Fuses and fusible link
- Globes
- Oil seals for input/output shafts
- Wheel bearings
- Tyres and tubes
- Valves for rubes
- Tyre/tube patches, glue etc.
- Spare wheel*

**Lubricants etc.**
- Engine oil
- Transmission oil
- Distilled water
- Water - enough to fill radiator in addition to drinking water

**Tools**
- Wheel brace/spanner*
- Comprehensive tool kit
  - (with all necessary size sockets & spanners)
- Jack (standard)* and base plate
- Jumper leads
- Tyre pump
- Tyre pressure gauge
- Tyre levers
- Rubber mallet
- Spare tube
- Tub patch kit
- Hacksaw and blades
- G Clamp
- Drill - hand or 12 volt and set of drill bits
- Soldering iron (12 volt) and solder
- Wire brush
- Electrical circuit tester

**Miscellaneous Repair Items**
- Spare nuts
- Bolts
- Aero start
- Washers etc.
- Gasket cement
- PVC fuel hose
- Contact cement
- Silicone adhesive
- Araldite, Plastibond etc.
- Radiator stop leak
- Fencing wire
- Dewatering fluid (eg. CRC)
- Duct of Gaffers tape
- Self amalgamating tape
- Insulation tape

**Recovery Equipment**
- High lift jack
- Leather gloves
- Snatch strap
- Rope
- Winch
- Shovel
- Snatch block
- Shackles

**Other Essential Items**
- Vehicle handbook*
- Maps and compass
- First air kit
- Fire extinguisher
- Knife (pocket or sheath)
- Trouble lamp
- Workshop manual
- Survival book
- Survival kit

**Optional Items to Consider**
- Portable warning signs
- Wheel chains
- Jerry cans
- CB radio
- Pick
- Radiator blind or tarpaulin
- Flares
APPENDIX 11

RECOMMENDED LIMITS ON DRIVING AND WORK TIME

CSIRO Driving Regimes (from CSIRO Policy Field work in Remote Locations, Dec 1993)

Application
These guidelines apply to staff driving on bitumen roads under normal conditions such as travelling to and from the remote work. Additional guidelines may need to be developed for off road and rough terrain in remote areas. These matters should be taken into account when developing trip plans for remote work.

Total travel time
No more than 8 hours in a period of 24 hours should be taken up with driving. The total time spent travelling, inclusive of breaks, should not exceed 12 hours, even where the driving is shared by two or more staff.

Total duty per day
Ordinary duty (which does not involve driving duty) combined with driving duty should not exceed 12 hours in any period of 24 hours.

Rest periods
On completion of each period of 2 hours driving, a person driving continuously should take a rest period of at least 20 minutes away from the vehicle. Where officers are sharing the driving responsibility, a change of driver should take place at least at 2 hourly intervals.

Driving roster
After a person has been the sole driver of a vehicle for 3 consecutive days, his/her forth day should be a non-driving day.

Alcohol and drugs
No alcohol should be consumed nor any drugs taken during the period of the journey by an officer involved with driving duties.

Distance per day
Approximately 650 km should be the maximum a group travels by car in any one day. The distance which can be reasonably covered during a day will be governed by the type of vehicle, type of terrain, maximum time permitted to drive, and speed limits. Factors such as general safety, road and climatic conditions and weather should be taken into account as well as driver fatigue.

Federal Office of Transport

Private Motorists
15 minute break out of the car every 3 hours.

Bus & Truck Drivers

One person:
Maximum 12 hours per day driving time maximum 72 hours per week
Rest breaks - total of 30 minutes every 5.5 hours
Minimum break between driving shifts is ………….. hours

Two drivers:
Maximum ……… hours per day driving time per person
Maximum 66 hours per week per person
Same breaks apply as for one person.
APPENDIX 12

A SUMMARY OF BASIC FIREARM SAFETY RULES & TRANSPORT OF FIREARMS

The following information is taken directly from the *Firearms Safety Code*. The Queensland Police Service, 1997.

BASIC FIREARM SAFETY RULES

1. **TREAT EVERY FIREARM AS BEING LOADED**

Check every firearm yourself. Every firearm should be treated as loaded until it is cleared and seen to be empty of ammunition. Ensure that the firearm is unloaded and that the action is open when carrying, accepting from or passing to another person or when removing it from storage.

2. **ALWAYS POINT FIREARMS IN A SAFE DIRECTION**

Whether loaded or unloaded, make sure the muzzle is pointed in a SAFE direction. Be aware of where the bullet would go if the firearm discharged.

3. **NEVER HAVE LOADED FIREARMS IN THE CAR, HOME OR YOUR CAMP**

All firearms must be unloaded other than when they are being used to shoot. Ensure that when entering your car, house or your camp, all ammunition has been removed from all firearms. A firearm is unloaded when it has no ammunition in its breech, chamber, magazine or muzzle.

1. **IDENTIFY YOUR TARGET AND WHAT IS BEHIND IT**

Make certain of your target and what is behind it before you fire. Be aware of the path of the bullet and where it will stop should you miss or the bullet continues on after passing through your target.

2. **NEVER FIRE AT HARD SURFACES OR WATER**

Consider the area your target is in; could a ricochet occur? A ricochet will almost certainly result from shooting at smooth flat surfaces, water or hard surfaces such as rocks.

3. **STORE AMMUNITION AND FIREARMS SEPARATELY**

When not in use, your firearm must be stored in a locked container with ammunition stored separately. Firearms must be unloaded with the bolt removed if possible or the action broken.

4. **NO ALCOHOL OR DRUGS WHEN HANDLING FIREARMS**

Alcohol, drugs and medicines may impair judgement and co-ordination which are essential for the safe use of firearms. It is an offence to be in physical possession of, or use a firearm, whilst under the influence of liquor or a drug.

5. **DO NOT CLIMB FENCES OR OBSTACLES WITH LOADED FIREARMS**

Make sure before attempting to climb through a fence or negotiating any obstacle that your firearm is unloaded. Do not rely on safety catches.
TRANSPORT OF FIREARMS

All firearms must be transported in a securely closed container in an unloaded condition.

PUBLIC PLACES

In public places, it is a requirement of law that firearms must not be exposed to the view of the public without reasonable excuse. They also must be in a condition not capable of being discharged. Depending on the type of firearm, this may involve having the bolt removed, the action held open or an obstruction placed in the action to prevent it from closing, the action broken or the firearm disassembled.

VEHICLES

If transporting a firearm by vehicle:
- The person in control of the firearm must ensure that if the vehicle has a lockable boot, the firearm is locked in the boot.
- For vehicles which do not have a boot such as a tray back utility, the firearm must be locked in a metal container fixed to the vehicle or out of sight in a securely closed container.
- If a metal container fixed to the vehicle is used, the metal box or anything on it is not to suggest that there is a firearm inside.
- Ammunition must be stores separately from the firearm.
- A person in control of a firearm must not leave the firearm in the unlocked driver’s or passenger compartment unless the vehicle is being attended by someone licensed to possess the firearm.

AIRCRAFT

If travelling by air, you should contact the airline with which you are travelling well before the departure date. You are required to declare carriage of firearms and ammunition and they will advise you of their requirements as to how your firearms are to be transported. Generally, when travelling by air:
- firearms must be in a locked container
- passenger must have the key to the container
- firearms will be checked by airline staff at check-in to ensure that they are unloaded. Extra time of at least 45 minutes should be allowed for this to be done
- no loose ammunition will be transported. All ammunition must be packed in manufactures packaging and in accordance with carriage of dangerous goods.

Under no circumstances will ammunition or firearms be permitted to be carried in the passenger compartment of any aircraft.

BUSES AND TRAINS

If travelling on trains and buses, all firearms should be carried in a sturdy securely closed container with any ammunition carried in a separate container to the firearm. They may be required to be carried with general luggage rather than in passenger compartments. Contact the carrier with whom you are travelling and ascertain their requirements as to the carriage of your firearm or ammunition.

If you need to travel on metropolitan trains, firearms are to be carried in a securely closed container and not exposed to the view of the public. These are public places and the same requirements apply.

Remember that ammunition is classed as dangerous goods and may need special packaging to comply with transport regulations imposed on the carrier.