

FIELD RESEARCH SAFETY GUIDANCE

Tips on Preparing for Your Field Project



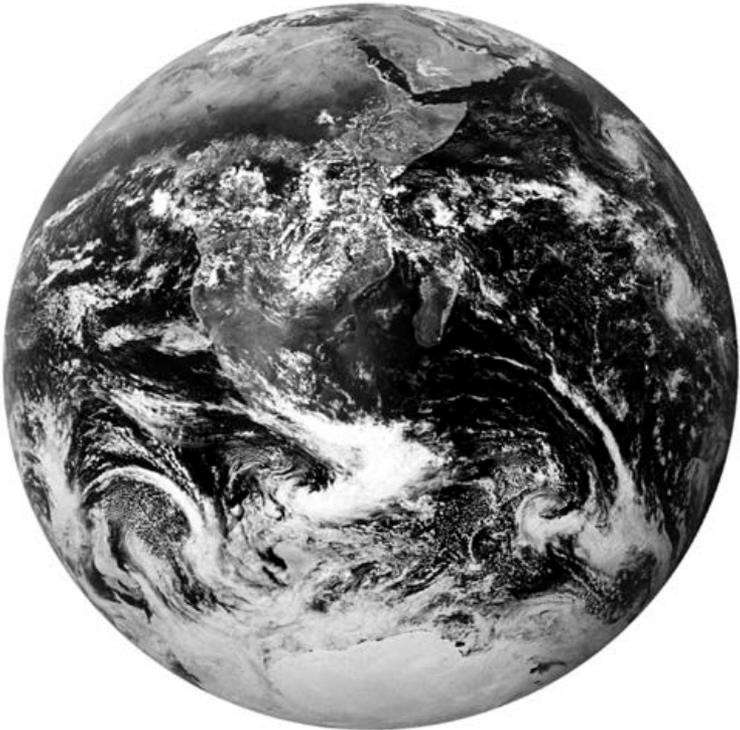
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Introduction

Field research is an essential component of several academic programs at the Institute. With the importance and excitement associated with field work, however, it can be easy to forget that work performed in the field can often be dangerous. Fortunately, sufficient planning and preparation for such work will greatly reduce the likelihood of accidents, incidents, illnesses, and injuries occurring while in the field.

This brief guide will provide you with some of the essential information required to adequately plan for off-campus field work.



Basic Information & General Precautions

There are some basic procedures that you should perform before any off-campus field work begins:

- Leave a written description of the trip with a responsible person within your department or office. Include a detailed description of your planned activities; a detailed itinerary with transportation details, accommodation details, and telephone numbers and addresses for where you'll be; emergency contact information; and names and contact information for individuals located at or near your field location who can contact you if necessary. A template is available from the MIT-EHS Office (Site-Specific Health & Safety Plan) that will allow you to easily organize this information.
- If you are going on an organized trip with several participants and a designated trip organizer, the trip organizer will be responsible for putting most of the above information into a Site-Specific Health & Safety Plan. You should review this Plan and sign it. See the "Responsibilities" section of this manual for more information.
- If working in a remote or dangerous location, ensure that a local, responsible, trustworthy party is aware of your field location each day (hotel staff may be a good choice). Inform this person of your return at the end of each day and provide this person with contact information for those who should be informed if you do not return.
 - When on your trip, check in with your department or office often.
 - If you are traveling outside of the United States, contact MIT Medical to determine if you'll need any special medical tests or vaccinations before you depart. Start this process many months before your departure.
- If you'll be working in a remote location or an area where emergency services are limited, consider taking a CPR &

ITINERARY	
Day 1:	_____

Day 2:	_____

Day 3:	_____



First Aid Class. Contact MIT Medical's Center for Health Promotion and Wellness for a schedule of classes.

- Before departing, find out about any plants, animals, terrain, and weather conditions that may be hazardous in the area where you'll be working. It may be helpful to talk to your sponsor/supervisor and others who have visited or lived in the area for this information.
- Whenever possible, work in the immediate vicinity of at least one other person (use the "Buddy System")
- Always carry photo identification
- Contact your health insurance carrier or a Human Resources representative to find out what you should do to ensure coverage if you get hurt or become ill and need medical attention while traveling.
- Put together a site-specific Health & Safety Plan for your project. MIT-EHS has a template that you can use - email fieldsafety@mit.edu for more information.

What Should I Pack?

Depending on the project, it may be beneficial to have some of the following items on-hand:

- A first aid kit and manual. Suggested contents of the kit include:
 - 16 bandage adhesive strips (1" x 3")
 - 1 large gauze compress (24" x 72")
 - 2 rolls of adhesive tape (0.5" x 2.5 yds)
 - 4 sterile pads (3" x 3")
 - 1 triangular bandage unit
 - 6 burn treatment applications
 - 10 antiseptic applications
 - 2 pair vinyl exam gloves
 - bite/sting supplies



You can buy a kit with most of these products at:

<http://www.firstaidsuppliesonline.com>

- Any medications that you take regularly
- Allergy medications (if you have allergies)
- Sunscreen (minimum SPF 30)
- Sun-protective hat
- Water filtration/purification devices
- Emergency vehicle kit (if you'll be driving)
- Communication devices (ensure that they'll operate in the area where your traveling)
- Flashlight
- Emergency flares
- Other personal protective equipment (PPE) as needed for the work you'll be doing, such as:
 - Nitrile or other appropriate chemically-resistant gloves
 - Safety glasses or goggles
 - Hard hat
 - Work boots (safety toe and/or shank, if needed)
 - Rain gear - select the color of the rain gear so that it contrasts with your surroundings.
 - Cold weather clothing

Always keep in mind restrictions on materials that are allowed onto passenger airplanes. For instance, if liquids are not allowed into the cabin of an airplane, do not pack them in your carry-on luggage. The EHS Office can help you determine what materials may be restricted on passenger or cargo airplanes.



Environmental & Physical Hazards

Environmental and physical hazards are present in all regions of the world. Common hazards are listed below and should be contemplated thoroughly before you depart. Keep in mind that this list is not exhausted - hazards particular to your location of field work should be addressed in your site-specific Health & Safety Plan.

- Dehydration
- Water impurities
- Sunburn
- Heat stress (including heat exhaustion and heat stroke)
- Cold stress (including frost bite and hypothermia)
- Vehicle exhaust
- Weather extremes
- High altitudes
- Poisonous plants
- Biting insects
- Dangerous animals
- Hunting season (mostly in North America)
- Violent crime
- Theft
- Working on, over, or near water (see the EHS Office's Boating Safety Manual)



Animals & Pests

When working in the field, animals and pests can often become problematic. The following are some general guidelines for avoiding unwanted animals and pests while in the field:

- Keep all garbage in closed containers and away from where you're working or camping
- Shake out clothing and bedding before using it
- Avoid working or camping near visible animal nests/burrows
- Be aware of locations where animals tend to live or hide (wood piles, rock piles, holes in the ground or in trees, crevices)
- Especially avoid contact with sick or dead animals
- In areas where insects are problematic, wear long pants and sleeves. Tuck your pants into your boots or socks. Wear insect repellent (DEET) on your clothing (do not spray directly on skin - see photo at right).
- When lighting is not required after dark, minimize lights that you keep on. Lights can attract insects and animals after dark.
- Use mosquito netting to keep pests away from food/people
- Seek medical attention if you are bitten by a poisonous or unknown insect, an animal, or if a bite doesn't heal.



The following is a partial list of dangerous animals/pests that exist throughout the world. Check to see if these animals/pests may be present in the area where you're traveling and find out how to minimize your chances of encountering them:

- Sharks
- Crocodiles / alligators
- Rodents
- Conenose bugs
- Mosquitoes
- Bears
- Mountain lions
- Snakes





- Spiders
- Scorpions
- Bees, hornets, and wasps
- Fleas and ticks
- Lions and other large cats
- Large land dwellers (e.g., hippopotamuses, water buffalo)
- Other water dwellers (e.g., barracuda, man-o-war)

Diseases

There are many common infectious diseases throughout the world. Ask your physician about diseases that may be specific to the area where you'll be traveling (especially if you're venturing beyond the United States).

There are many steps you can take to help avoid contracting most infectious diseases:

- Cook your food thoroughly
- Only drink water from sources you know are pure
- Wash fruits and vegetables thoroughly before consuming
- Avoid contact with human bodily fluids
- Obtain vaccinations that are recommended by your physician and be up-to-date with your tetanus vaccination
- Be cautious when disturbing dry soil or when working near bat or bird droppings - discourage dust production by keeping the area wet
- Avoid working in water - especially standing or flood water. Never enter such water when you have open wounds that could be in contact with it



- Wash your hands, forearms, and face frequently; bathe daily
- Use caution when working near wild rodents. If you discover a dead rodent and must remove it, first don nitrile or vinyl gloves and spray or pour a bleach and water solution (1.5 cups of bleach to 1 gallon of water) on the animal. Don't sweep or vacuum rodent droppings - wet them with the bleach solution and wipe up while wearing nitrile or vinyl gloves.
- Use mosquito netting in warm climates while sleeping
- Heat bath water to over 50 degrees Celsius for at least 5 minutes

Responsibilities

Professor, Instructors, and/or Trip Organizers

People who plan and lead field work are responsible for several things:

- Complete a site-specific Health & Safety Plan that outlines pertinent details about the trip. An easy-to-complete template is available through the MIT-EHS Office - email fieldsafety@mit.edu for more information.
- Once the site-specific Health & Safety Plan is completed, submit it to the MIT-EHS Office. It can be sent as an attachment to an email (fieldsafety@mit.edu). The MIT-EHS Office will review your Plan, but this review will not hold up your trip (see MIT-EHS Office responsibilities described below).
- Ensure that those going on the trip review the site-specific Health & Safety Plan and this manual before they depart and sign the signature page within the Plan.
- Ensure that those going on the trip leave emergency contact information and any other pertinent, relative information with a designated, responsible person in the department office
- Answer any questions from trip participants

Trip Participants

People who plan to participate in field work are responsible for the following:

- Review the site-specific Health & Safety Plan and this manual before you depart and sign the signature page within the Plan
- Provide your trip organizer with emergency contact information or other pertinent information (e.g., special medical needs) to be left with a designated, responsible party
- Ask the trip organizer or EHS Office any questions that you have about the trip

MIT-EHS Office

The MIT-EHS Office is responsible for the following:

- Review the site-specific Health & Safety Plan and provide the Plan preparer with suggestions on any improvements that could be made or areas where information needs to be expanded. This review process will not delay the trip - formal "approval" of the Plan is not required
- Provide assistance and information to the Plan preparer if requested
- Answer questions from the trip organizer and/or participants

Departments, Labs, and/or Centers EHS Coordinators

- Inform MIT-EHS Office of upcoming trips planned within their department, lab, or center

More Information & Resources

If you have any questions regarding the information in this manual or have suggestions on how we can improve this publication, please contact the MIT-EHS Office at x2-EHSS or 617-452-3477. You can also email questions and comments to fieldsafety@mit.edu.

For additional general information on health & safety while traveling, please visit the following websites

[MiTiCC Resources for International Activities](#)

[International Travel Risk Policy Country Warning Levels](#)
(links to the CDC, the WHO and the US Dept. of State)

[National Oceanic and Atmospheric Administration \(NOAA\)](#)

[Weather Safety](#)

[MIT Medical Department](#)

[Travel Health Clinic](#)