

# deployment atlas



## A Health Care Tool for Clinicians & Patients

This atlas was produced by the DoD Deployment Health Clinical Center to provide service members with important information to help them stay healthy and safe during deployment. The information includes area-specific descriptions of diseases and environmental exposures with recommendations for practical preventive measures. Deployment-

specific immunizations have not been included because of varying Service-specific requirements.

The areas included in the atlas are:

- Afghanistan
- The Balkans
- Iraq
- Kuwait
- The Philippines
- South Korea
- West Africa
- The United States & Territories



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specific immunizations have not been included because of varying Service-specific requirements.

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A map of Afghanistan and its neighboring countries, including Russia, Georgia, Armenia, Azerbaijan, Turkey, Iraq, Kuwait, Bahrain, Qatar, Saudi Arabia, U.A.E., Oman, Pakistan, and Iran. Afghanistan is highlighted in a lighter shade of blue. A thick yellow curved line runs from the top left towards the bottom right, partially overlapping the map and the text boxes.

# Afghanistan

## Health Threats & Countermeasures

**TERRAIN:** Mostly rugged mountains (half the land is over 6,600 feet with the highest peak approximately 25,000 feet). Desert plains and rocky ranges in northwest, west and south. Approximately the size of Texas.

**CLIMATE:** Hot summers and cold winters (range 118° to -4° F). Arid to semi-arid.

**PUBLIC HEALTH ISSUES:** Food shortages, drought, lack of adequate health care and public health resources, refugee movement and increased congregations of malnourished people.

# Afghanistan

## ■ DISEASES

### Airborne Diseases

Because of the potential for crowded living conditions, stressful working environment and exposure to infected persons in disease-endemic areas, military personnel are particularly susceptible to diseases that are spread person-to-person by the respiratory route. Tuberculosis rates in Afghanistan are among the highest in the world. Diphtheria, measles and influenza are some of the other potential health threats.

*Avoid overcrowding in living areas; ensure good ventilation; sleep head-to-toe; cover nose and mouth when coughing/sneezing.*

*Avoid close contact with local population in crowded and enclosed spaces.*

### Food- and Water-Borne Diseases

Food and water (including ice) available in Afghanistan may be contaminated with pesticides, chemicals and human or animal waste. Consuming these items even once may cause severe illness. Service members are at greatest risk for diarrheal diseases (e.g. cholera), typhoid fever or hepatitis A or E. Afghanistan is one of the few remaining countries with poliovirus.

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating and after using the latrine. Keeping hands clean helps protect against food-, water- and airborne diseases.*

### Vector-Borne Diseases

Diseases can be transmitted by the bites from: mosquitoes (malaria, dengue, West Nile Virus); sand flies (leishmaniasis, sand fly fever); ticks (Congo-Crimean hemorrhagic fever); body lice (louse borne typhus); mites (chiggers) (scrub typhus); and fleas (murine typhus). Afghanistan has two types of leishmaniasis. The cutaneous type produces skin lesions that may result in significant scars. The visceral type is rare and affects the internal organs. Symptoms may not emerge until 4-6 months or more after redeployment.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Taking malaria pills as directed is critical. Normally, you will begin taking medication prior to arriving in the area, while in the area and for several weeks after returning home. An additional type of malaria medication may be added for 2 weeks when you return home.*

Use the DoD Insect Repellent System, including:

- Wearing permethrin-treated uniforms with trousers bloused and sleeves down.
- Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.
- Sleeping under permethrin-treated bed net. (Many insects feed at night.)

Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.

Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)

Seek medical attention for lesions on exposed skin that do not heal.

### **Sexually Transmitted Diseases**

Gonorrhea, chlamydia and other STD infections are common. Hepatitis B, which is widespread, and human

immunodeficiency virus (HIV) are potentially fatal STDs that can be transmitted both sexually and by contaminated needles.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## **■ ENVIRONMENTAL EXPOSURES**

### **Sand, Wind and Dust**

Sand, wind and dust can cause health problems, particularly to skin, eyes, throat and lungs. The smoke from cow dung that is burned as a source of heat contributes to the dusty conditions in Afghanistan. Dry air, dust and wind can dry out the nose and throat and cause nosebleeds, coughing and wheezing. Cracked, chapped fingers reduce manual dexterity. Body areas that collect dust and sand (such as ears, armpits and groin) are susceptible to chafing, abrasion and infection. High winds can turn loose objects into flying missiles.

*Shield your face with cloth materials and your eyes with goggles to protect them from blowing dust and sand. (Wearing contact lenses is prohibited.)*

*Wash your face and eyelids several times daily. If possible, bathe daily; if not, use a washcloth to at least wash private areas, armpits and feet.*

*Breathe through a wet cloth, or coat the nostrils with a small amount of petroleum jelly to decrease drying of mucous membranes. Use lip balm to protect your lips and moisturizing lotion to protect your exposed skin. Wear gloves to protect your hands.*

*If you already take medicine for asthma or other breathing conditions, take extra medication (at least a 90-day supply) with you.*

### **Heat, Cold and Altitude**

Extreme night and day temperature changes, in addition to extreme seasonal temperature ranges, increase the potential for heat and cold injuries. Operations at

altitudes over 6,000 feet can cause serious illness or death if you are not acclimatized. Heat, wind, dry air and higher altitudes increase the daily water requirement. The effects of cold weather are more severe in high mountainous areas.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*When deployed to high mountain areas, watch for the symptoms of mountain sickness (headache, nausea, vomiting, dizziness, fatigue, irritability and coughing). Seek medical attention immediately for any of these symptoms.*

### **Hazardous Materials**

Exposure to toxic chemicals resulting from industrial and agricultural

pollution, terrorist activities or improper handling/disposal of hazardous materials used by our own forces is a possibility.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

### **Diseases/Hazards from Animals/Plants**

Diseases that can be transmitted from animal to man include: rabies, a fatal disease contracted from the bite/scratch of a rabid animal, and anthrax, a disease that can be contracted from touching or eating infected animals or inhaling dust that contains the anthrax bacteria. Afghanistan has several species of aggressive, highly poisonous snakes and some potentially lethal species of scorpions and spiders. Hazardous plants include plants

with thorns, stinging hairs and toxic resins that can puncture the skin and cause rashes or infection. Some species of plants are poisonous if chewed or swallowed. If these plants are burned, contact with the smoke can cause skin rashes or lung damage.

*When possible, avoid contact with snakes, scorpions, spiders and all animals. Seek immediate medical attention if bitten or stung. Avoid contact with unfamiliar plants.*

*Wash skin and clothing after contact with animals, dust around animals and hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in fighting and training positions for potentially dangerous animals and insects.*

*Bivouac away from areas currently or previously inhabited by animals, including rodents.*

# The Balkans

## Health Threats & Countermeasures

**COUNTRIES:** Albania, Bosnia/Herzegovina, Bulgaria, Croatia, Greece, Macedonia, Romania, Serbia/Montenegro/Kosovo (the former Yugoslavia) and Slovenia.

**TERRAIN:** Mostly rugged mountain ranges (highest elevation nearly 9,600 feet in the Rila Mountains of Bulgaria) with a few flat or rolling coastal and inland plains.

**CLIMATE:** Generally temperate with cold winters and hot, humid summers inland and mild winters

and dry summers along the coast. Temperatures generally range between 28° and 84° F, although the mountainous regions are much colder with snow possible year-round. This region contains some of the wettest areas in Europe in the winter.

**PUBLIC HEALTH ISSUES:** Extensive environmental contamination from industrial sources, traffic, agricultural run-off and raw sewage has caused localized air, water and soil pollution. Air pollution is worse during winter (climatic inversions). Public health infrastructure is weak.

# The Balkans

## ■ DISEASES

### **Airborne Diseases**

Tuberculosis (TB), a disease contracted by breathing in TB bacteria that have been coughed or sneezed into the air, is a concern in the Balkans, as is diphtheria.

*Avoid close contact with local population in crowded and enclosed spaces.*

### **Food- and Water-Borne Diseases**

Diseases of greatest risk from contaminated food and water (including ice) are bacterial diarrhea and hepatitis A. Consuming contaminated items even once may cause severe illness.

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or*

*eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### **Vector-Borne Diseases**

In the Balkans, several significant diseases occur that are transmitted by the bite of insects, including sand flies (cutaneous and rarely visceral leishmaniasis and sand fly fever); fleas (murine typhus); ticks (tick-borne encephalitis, Lyme disease, Crimean-Congo hemorrhagic fever) and mosquitoes (West Nile fever). These diseases are widespread and are more common in rural areas especially from March through October. Other diseases spread by the bites of mosquitoes, ticks, sand flies, fleas and lice also can occur.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.*
- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

*Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.*

*Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)*

*Seek medical attention for lesions on exposed skin that do not heal.*



## **Sexually Transmitted Diseases**

Gonorrhea, chlamydia and other STDs are common. Hepatitis B and human immunodeficiency virus (HIV) (potentially fatal diseases that can be transmitted both sexually and by contaminated needles) also occur.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## **■ ENVIRONMENTAL EXPOSURES**

### **Heat, Cold and Altitude**

Heat injuries are possible during the summer months, especially in unacclimatized individuals. Cold injuries are the more serious threat in the Balkans, with the effects of cold weather being more severe in high mountainous areas. Operations at elevations over 6,000 feet can cause serious illness or death if you are not acclimatized. Heat, wind, dry air and higher altitudes increase the daily water requirement.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

*When deployed to high mountain areas, watch for the symptoms of mountain sickness (headache, nausea, vomiting, dizziness, fatigue, irritability and coughing). Seek medical attention immediately for any of these symptoms.*

### **Wind and Dust**

Black winds, named after the large amount of dust they carry, are quite common in the winter along the Danube

River Basin. Wind and dust can dry out the nose and throat, cause nosebleeds, coughing and wheezing and chap the skin. Body areas that collect dust are susceptible to chafing, abrasion and infection. High winds can turn loose objects into flying projectiles.

*Shield your face with cloth materials and your eyes with goggles to protect them from blowing dust and sand. (Wearing contact lenses is prohibited.)*

*Wash your face and eyelids several times daily using an approved water source. If possible bathe daily; if not, use a washcloth to at least wash private areas, armpits, feet.*

*Breathe through a wet cloth, or coat the nostrils with a small amount of petroleum jelly to decrease drying of mucous membranes. Use lip balm to protect your lips and moisturizing lotion to protect your exposed skin. Wear gloves to protect your hands.*

*If you already take medicine for asthma or other breathing conditions, take extra medication (at least a 90-day supply) with you.*

### **Hazardous Materials**

Exposure to toxic chemicals resulting from industrial and agricultural pollution, terrorist activities or improper handling/disposal of hazardous materials used by our own forces is a possibility. Fragments and particles of depleted uranium (DU) may be found in the soil and dust in areas hit by DU munitions. Although the potential that this exposure to DU will affect your health is low, you should follow procedures taught in DU Awareness Training to minimize exposure risk.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

*Do not touch spent munitions or save as souvenirs. Exercise standard field hygiene, to include washing your hands and face.*

### **Diseases/Hazards from Animals/Plants**

Diseases in the Balkans that can be transmitted from animal to man include: rabies, a fatal disease contracted from the bite/scratch of a rabid animal and anthrax, a disease that can be contracted from touching or eating infected animals or inhaling dust that contains the anthrax bacteria. The Balkans has several species of aggressive, highly poisonous snakes and some potentially lethal species of scorpions and spiders. Hazardous plants include plants with thorns, stinging hairs and toxic resins that can puncture the skin and cause rashes or infection. Some species of plants are poisonous if chewed or swallowed.

If these plants are burned, the smoke can cause skin rashes or lung damage.

*When possible, avoid contact with snakes, scorpions, spiders and all animals. Seek immediate medical attention if bitten, stung or scratched. Avoid contact with unfamiliar plants.*

*Wash skin and clothing after contact with animals, dust around animals and hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in training or fighting positions for potentially dangerous animals and insects.*

*Avoid areas currently or previously inhabited by animals, including rodents.*

A map of Iraq and its surrounding countries, including Turkey, Iran, Saudi Arabia, and others. Iraq is highlighted in a lighter shade of blue. A yellow curved line is on the left side of the map. The word 'Iraq' is written in large white letters at the top center.

# Iraq

## Health Threats & Countermeasures

**TERRAIN:** Middle Eastern country approximately the size of California. Mostly broad plains; reedy marshes along Iranian border in south with large flooded areas; mountains along the border with Turkey reach about 7,000 feet and near the border with Iran the highest peak is about 11,800 feet.

**CLIMATE:** Mostly desert. Mild to cool winters. Hot, dry nearly cloudless summers (May through October).

Mountainous regions along Iranian and Turkish borders experience cold winters with occasionally heavy snows. Temperature range is 25° to 122° F.

### **PUBLIC HEALTH ISSUES:**

Extensive environmental contamination from industrial sources, agricultural chemicals and raw sewage has caused localized air, water and soil pollution and contaminated food sources; significantly damaged public health and utilities infrastructure.

# Iraq

## ■ DISEASES

### Airborne Diseases

Iraq has one of the highest rates of tuberculosis (TB) in the world. TB is a disease contracted by breathing in TB bacteria that have been coughed or sneezed into the air. Diphtheria is also endemic in Iraq.

*Avoid close contact with local population in crowded and enclosed spaces.*

### Food- and Water-Borne Diseases

Food and water (including ice) may be contaminated with pesticides, chemicals and human or animal waste. Consuming these items even once may cause severe illness, such as bacterial diarrhea, hepatitis A and typhoid/paratyphoid fever. Service members are also at risk for contracting protozoal diarrheas. Iraq is one of the few remaining countries with poliovirus.

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### Vector-Borne Diseases

Malaria, a disease transmitted by mosquitoes, presents a seasonal risk from May through November. There is also a risk for leishmaniasis and sand fly fever, both diseases transmitted by the bite of infected sand flies. There are two types of leishmaniasis in Iraq. The cutaneous type produces skin lesions that may result in significant scars. The visceral type is rare and affects the internal organs. Symptoms may not emerge until 4-6 months or more after redeployment.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Taking malaria pills as directed is critical. Normally, you will begin taking medication prior to arriving in the area, while in the area, and for several weeks after returning home. An additional type of malaria medication may be added for 2 weeks after you return home.*

*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.*
- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

*Seek medical attention for lesions on exposed skin that do not heal.*

## **Sexually Transmitted Diseases**

In Iraq, gonorrhea and chlamydia are the most likely STDs to be acquired.

However, care should also be taken to protect yourself against human immunodeficiency virus (HIV) and hepatitis B (potentially fatal diseases that can be transmitted both sexually and by contaminated needles).

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## **ENVIRONMENTAL EXPOSURES**

### **Sand, Wind and Dust**

Sand and dust storms, which are common from May through October, can cause health problems, particularly to skin, eyes, throat and lungs. Dry air, dust and wind can dry out the nose and throat and cause nosebleeds, coughing and wheezing. Cracked, chapped fingers reduce manual dexterity. Body areas

that collect dust and sand (such as ears, armpits and groin) are susceptible to chafing, abrasion and infection. High winds can turn loose objects into flying missiles.

*Shield your face with cloth materials and your eyes with goggles to protect them from blowing dust and sand. (Wearing contact lenses is prohibited.)*

*Wash your face and eyelids several times daily using an approved water source. If possible bathe daily; if not, use a washcloth to at least wash private areas, armpits, feet.*

*Breathe through a wet cloth or coat the nostrils with a small amount of petroleum jelly to decrease drying of mucous membranes. Use lip balm to protect your lips and moisturizing lotion to protect your exposed skin. Wear gloves to protect your hands.*

*If you already take medicine for asthma or other breathing conditions, take extra medication (at least a 90-day supply) with you.*

## **Heat, Cold and Altitude**

Extreme night and day temperature changes, in addition to extreme seasonal temperature ranges, increase the potential for heat and cold injuries. Operations at altitudes over 6,000 feet can cause serious illness or death if you are not acclimated. Heat, wind, dry air and higher altitudes increase the daily water requirement. The effects of cold weather are more severe in high mountainous areas.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

*When deployed to high mountain areas, watch for the symptoms of mountain sickness (headache, nausea, vomiting, dizziness, fatigue, irritability and coughing). Seek medical attention immediately for any of these symptoms.*

### **Hazardous Materials**

Exposure to toxic chemicals resulting from industrial or agricultural pollution, terrorist activities or improper handling/disposal of hazardous materials used by our own forces is a definite possibility. Although the potential that battlefield exposure to depleted uranium (DU) will affect your health is low, you should follow procedures taught in DU Awareness Training to minimize exposure risk.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

*Assume a depleted uranium (DU) contamination zone of 50 meters around actively burning fires involving any armored combat vehicles. Do not touch spent munitions or save as souvenirs. Exercise standard field hygiene, to include washing your hands and face.*

### **Diseases/Hazards from Animals/Plants**

Diseases that can be transmitted from animal to man include: rabies, a fatal disease contracted from the bite/scratch of a rabid animal and anthrax, a disease that can be contracted from touching or eating infected animals or inhaling dust that contains the anthrax bacteria. Iraq has several species of venomous snakes, scorpions and spiders. Hazardous plants include plants with thorns, stinging hairs and toxic resins that may puncture the skin and cause rashes or infection. Some

species of plants are poisonous if chewed or swallowed. If these plants are burned, contact with the smoke can cause skin rashes or lung damage.

*When possible, avoid contact with snakes, scorpions, spiders and all animals. Seek immediate medical attention if bitten, stung or scratched. Avoid contact with unfamiliar plants.*

*Wash skin and clothing after contact with animals, dust from around animals and hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in fighting and training positions for potentially dangerous animals and insects.*

*Avoid areas currently or previously inhabited by animals, including rodents.*

# Kuwait

## Health Threats & Countermeasures

**TERRAIN:** Flat to slightly undulating desert plain with a few oases. Approximately the size of New Jersey. Highest elevation is approximately 1000 feet.

**CLIMATE:** Intensely hot and dry summers with temperature ranging from 108°-115° F; winters are short (December-February) and cool averaging 50°-80° F with limited rain. Sudden cloud-bursts of heavy rain are common from October to April. Sandstorms and

dust storms occur throughout the year but are most common between March and August.

### **PUBLIC HEALTH ISSUES:**

Air pollution from petroleum refineries, petrochemical manufacturing facilities and desalination plants; seafood caught off the coast may be contaminated with toxic metals; soil contamination with metals and petroleum resulting from environmental warfare, industrial waste disposal and air pollution.

# Kuwait

## ■ DISEASES

### **Airborne Diseases**

Air contamination from industrial sources and dust from the desert environment may cause a short-term decrease in lung function and affect the health of persons with underlying respiratory conditions, such as asthma.

*Consult your local medical authority for information on threat in your area.*

### **Food- and Water-Borne Diseases**

Diseases of greatest risk from consuming contaminated food and water (including ice) in Kuwait are bacterial diarrhea and hepatitis A. Consuming contaminated items even once may cause severe illness. Other diseases include protozoal diarrhea and typhoid/paratyphoid fever. Ingestion of food or water contaminated with toxic metals poses the greatest long-term risk.

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### **Vector-Borne Diseases**

Personnel are at risk for sand fly fever year-round, with an increased risk from April through November.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.*
- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

### **Sexually Transmitted Diseases**

STDs are found in every area in the world. In Kuwait, gonorrhea and chlamydia are the most likely STDs to be acquired. However, care should also be taken to protect yourself against human immunodeficiency virus (HIV) and hepatitis B (potentially fatal diseases that can be transmitted both sexually and by contaminated needles).



*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## ■ ENVIRONMENTAL EXPOSURES

### Heat and Cold

Extreme heat is a significant medical threat in Kuwait, especially during the early stages of deployment. The desert can also become dangerously cold at night. Heat and cold injury prevention training is important and acclimatization to the heat is critical.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

### Sand, Wind and Dust

During sand and dust storms, airborne dust and sand may cause health problems, particularly to skin, eyes, throat and lungs. Some areas of Kuwait are particularly dry and dusty. Dry air, dust and wind can dry out the nose and throat and cause nosebleeds, coughing and wheezing. Cracked, chapped fingers reduce manual dexterity. Body areas that collect dust and sand (such as ears, armpits and groin) are susceptible to chafing, abrasion and infection. High winds can turn loose objects into flying missiles.

*Shield your face with cloth materials and your eyes with goggles to protect them from blowing dust and sand. (Wearing contact lenses is prohibited.)*

*Wash your face and eyelids several times daily using an approved water source. If possible bathe daily; if not, use a washcloth to at least wash private areas, armpits, feet.*

*Breathe through a wet cloth, or coat the nostrils with a small amount of petroleum jelly to decrease drying of mucous membranes. Use lip balm to protect your lips and moisturizing lotion to protect your exposed skin. Wear gloves to protect your hands.*

*If you already take medicine for asthma or other breathing conditions, take extra medication (at least a 90-day supply) with you.*

## **Hazardous Materials**

Exposure to toxic chemicals and materials resulting from environmental/industrial pollution or improper handling of hazardous materials used by our own forces is a possibility.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

## **Diseases/Hazards from Animals**

Wild dogs roaming troop areas in Kuwait could be a source of rabies, a fatal disease transmitted by the bite or scratch of a rabid animal.

*Avoid contact with domestic (cats, dogs), farm and wild animals. Do not feed, handle or keep animals as pets or mascots. Seek immediate medical attention if you are bitten or scratched.*



A map of Southeast Asia with the Philippines highlighted in white. The map shows the Philippines' location relative to neighboring countries like China, Vietnam, and Indonesia, and islands like Taiwan, Guam, and Palau. A yellow curved line separates the map from the text on the right.

# The Philippines

## Health Threats & Countermeasures

**TERRAIN:** Group of more than 7,100 islands off the southeast coast of Asia with a total land area slightly larger than Arizona. Eleven islands contain more than 94% of the land. Larger islands have mountain ranges with average heights of 3,900 to 7,000 feet and narrow strips of lowlands along the coasts.

**CLIMATE:** Mostly tropical with uniform daily temperatures ranging between 79° and 82° F. Northeastern

monsoon brings cool, dry air (November to April), while the southwestern monsoon brings heavy rains (May to October). Natural hazards include typhoons, floods, volcanoes, earthquakes, tsunamis (large tidal waves) and landslides.

**PUBLIC HEALTH ISSUES:** Water pollution from industrial wastes, fertilizers and domestic raw sewage; lack of trash disposal sites in Manila resulting in insect and rodent infestations; localized air and soil pollution from industrial facilities.

# The Philippines

## ■ DISEASES

### **Airborne Diseases**

Tuberculosis is a disease contracted by breathing in TB bacteria that have been coughed or sneezed into the air. TB is highly endemic in the Philippines. Diphtheria is also endemic.

*Avoid close contact with local population in crowded and enclosed spaces.*

### **Food- and Water-Borne Diseases**

Diseases caused by consuming contaminated food and water (including ice) are common in the Philippines. Consuming contaminated food or water even once may cause severe illness. Diseases that present the greatest risk are: bacterial diarrhea, hepatitis A and typhoid/paratyphoid fever. Other diseases include: hepatitis E, protozoal diarrheas and occasionally, cholera. Local food and water sources (including ice) may contain unsafe

levels of pesticides and chemicals and be contaminated with animal or human waste. Toxic algal blooms can contaminate shellfish which if eaten can cause paralysis (paralytic shellfish poisoning).

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### **Vector-Borne Diseases**

Diseases transmitted by mosquitoes that are of the greatest concern in the Philippines are malaria (except in Manila and major urban areas), dengue fever,

Japanese encephalitis and Chikungunya fever. Scrub typhus, transmitted by mites (chiggers), and murine typhus, transmitted by fleas, also occur. (Mites and fleas can be carried by rodents.) Significant vector-borne disease transmission is sustained year-round to include urban areas. The risk of mosquito-borne diseases is elevated during and immediately after the rainy season when the mosquito population increases. Many other diseases may be spread by the bites of mosquitoes, ticks, sand flies, fleas, mites and lice.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Taking malaria pills as directed is critical. Normally, you will begin taking medication prior to arriving in the area, while in the area and for several weeks after returning home. An additional type of malaria*

medication may be added for 2 weeks after you return home.

Use the DoD Insect Repellent System, including:

- Wearing permethrin-treated uniforms with trousers bloused and sleeves down.
- Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.
- Sleeping under permethrin-treated bed net. (Many insects feed at night.)

Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.

Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)

### **Water- and Soil-Contact Diseases**

Schistosomiasis and leptospirosis are diseases that can be acquired from swimming, wading or other skin contact with contaminated water. Schistosomiasis is caused by contact with fresh water inhabited by infected snails and leptospirosis results from contact with water or damp soil contaminated with the urine of infected animals. Soil-transmitted infections caused by hookworms, roundworms and strongyloides that can penetrate the skin are prevalent in most rural areas.

*Avoid swimming, bathing or wading in natural bodies of fresh water (mission permitting). If you must be exposed, wear protective clothing and footwear. Towel dry skin vigorously and clean clothing afterwards.*

*Never go barefoot.*

*Keep skin clean and dry to prevent skin infections that thrive in moist conditions.*

### **Sexually Transmitted Diseases**

Gonorrhea, chlamydia and other STDs are very common in the Philippines, especially among commercial sex workers. Hepatitis B and human immunodeficiency virus (HIV) are also common and potentially fatal diseases that can be transmitted both sexually and by contaminated needles.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## **■ ENVIRONMENTAL EXPOSURES**

### **Heat**

High heat and humidity is a significant medical threat in the Philippines, especially during the early stages of deployment. Heat injury prevention training is

important and acclimatization to the heat is critical.

*Drink fluids based on heat category guidelines, not to exceed 1½ quarts per hour or 12 quarts per day. Follow prescribed work/rest cycles.*

*Wear proper clothing, sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Maintain good physical condition and nutrition.*

### **Hazardous Materials**

Exposure to toxic chemicals resulting from industrial pollution, terrorist activities or improper handling/disposal of hazardous materials used by our own forces is a possibility.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

### **Diseases/Hazards from Animals/Plants**

Rabies, a fatal disease transmitted by the bite or scratch of a rabid animal, is a disease of military importance in the Philippines. Also, the Philippines has several species of highly poisonous snakes and some potentially lethal species of spiders. Venomous sea snakes, fish and jellyfish, some of which can be lethal, are found throughout the country. Hazardous plants include plants with thorns, stinging hairs and toxic resins that can puncture the skin and cause rashes or infection. Some species of plants are poisonous if chewed or swallowed. If these plants are burned, the smoke can cause skin rashes or lung damage.

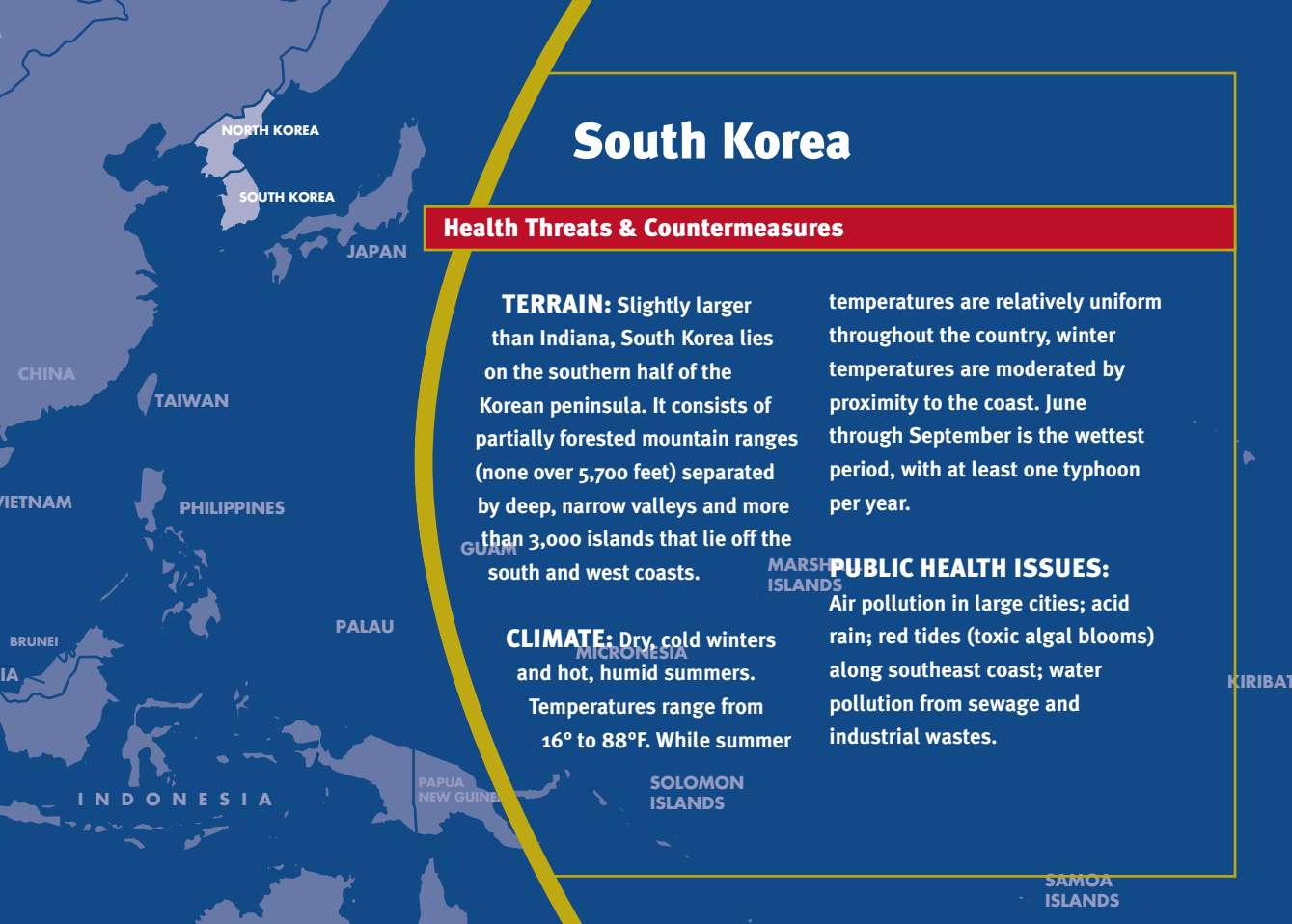
*When possible, avoid contact with snakes, spiders, jellyfish and animals. Seek immediate medical attention if bitten, stung or scratched. Avoid contact with unfamiliar plants.*

*Avoid contact with domestic (cats, dogs), farm and wild animals. Do not feed, handle or keep animals as pets or mascots.*

*Avoid swimming, bathing or wading in natural bodies of water, except at approved beaches, unless mission-required.*

*Wash skin and clothing after contact with hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in training positions for potentially dangerous animals and insects.*



# South Korea

## Health Threats & Countermeasures

**TERRAIN:** Slightly larger than Indiana, South Korea lies on the southern half of the Korean peninsula. It consists of partially forested mountain ranges (none over 5,700 feet) separated by deep, narrow valleys and more than 3,000 islands that lie off the south and west coasts.

**CLIMATE:** Dry, cold winters and hot, humid summers. Temperatures range from 16° to 88°F. While summer

temperatures are relatively uniform throughout the country, winter temperatures are moderated by proximity to the coast. June through September is the wettest period, with at least one typhoon per year.

### **PUBLIC HEALTH ISSUES:**

Air pollution in large cities; acid rain; red tides (toxic algal blooms) along southeast coast; water pollution from sewage and industrial wastes.

# South Korea

## ■ DISEASES

### Airborne Diseases

The incidence rate of tuberculosis (TB) is significantly higher than in the US. TB is a disease contracted by breathing in TB bacteria that have been coughed or sneezed into the air. Air pollution from vehicle and industrial exhausts may affect persons with underlying respiratory conditions, such as asthma.

*Avoid close contact with local population in crowded and enclosed spaces.*

### Food- and Water-Borne Diseases

The level of community sanitation varies but is generally below US standards. Consuming contaminated food or water even once may cause severe illness. Food-borne and water-borne illnesses occasionally occur, including bacterial diarrheal

illnesses caused by *Campylobacter*, *Shigella*, *Salmonella* and enterotoxigenic *E. coli*, and hepatitis A. Typhoid fever also occurs occasionally. Toxic algal blooms can contaminate shellfish which if eaten can cause paralysis (paralytic shellfish poisoning).

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### Vector-Borne Diseases

Malaria is endemic primarily along the western DMZ. Japanese encephalitis is rare and is only considered a threat for personnel spending extended periods in rice growing areas. Both diseases are transmitted by the bite of an infected mosquito. Scrub typhus, transmitted by the bite of mites (chiggers) and carried by rodents, occurs occasionally.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Taking malaria pills as directed is critical. Normally, you will begin taking medication prior to arriving in the area, while in the area and for several weeks after returning home. An additional type of malaria medication may be added for 2 weeks after you return home.*



*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.*
- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

*Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.*

*Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)*

### **Water- and Soil-Contact Diseases**

Leptospirosis is a potential risk for personnel who swim, wade or have other skin contact with water (e.g. freshwater streams) contaminated by the urine of

infected animals. Hantaviral hemorrhagic fever can be acquired by inhaling dust or droppings from areas infested with rodents.

*Avoid swimming, bathing or wading in natural bodies of fresh water (mission permitting). If you must be exposed, wear protective clothing and footwear. Towel dry skin vigorously and clean clothing afterwards.*

*Never go barefoot.*

*Keep skin clean and dry to prevent skin infections that thrive in moist conditions.*

*Try not to inhale dust or dirt in areas that have been inhabited by rodents.*

### **Sexually Transmitted Diseases**

STDs are found in every area in the world and can be serious or fatal (e.g., human immunodeficiency virus (HIV),

hepatitis B, gonorrhea). High levels of STDs occur among commercial sex workers. HIV and hepatitis B can also be transmitted by contact with contaminated needles.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

## **■ ENVIRONMENTAL EXPOSURES**

### **Heat and Cold**

Heat injuries can occur during the summer months and cold injuries are possible during the winter months. Heat and cold injury prevention training and acclimatization to the heat are important.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

### **Hazardous Materials**

Environmental and industrial pollution has been a problem in Korea due to rapid economic expansion. Exposure to toxic chemicals resulting from industrial pollution or improper handling/disposal of hazardous materials used by our own forces is a possibility.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

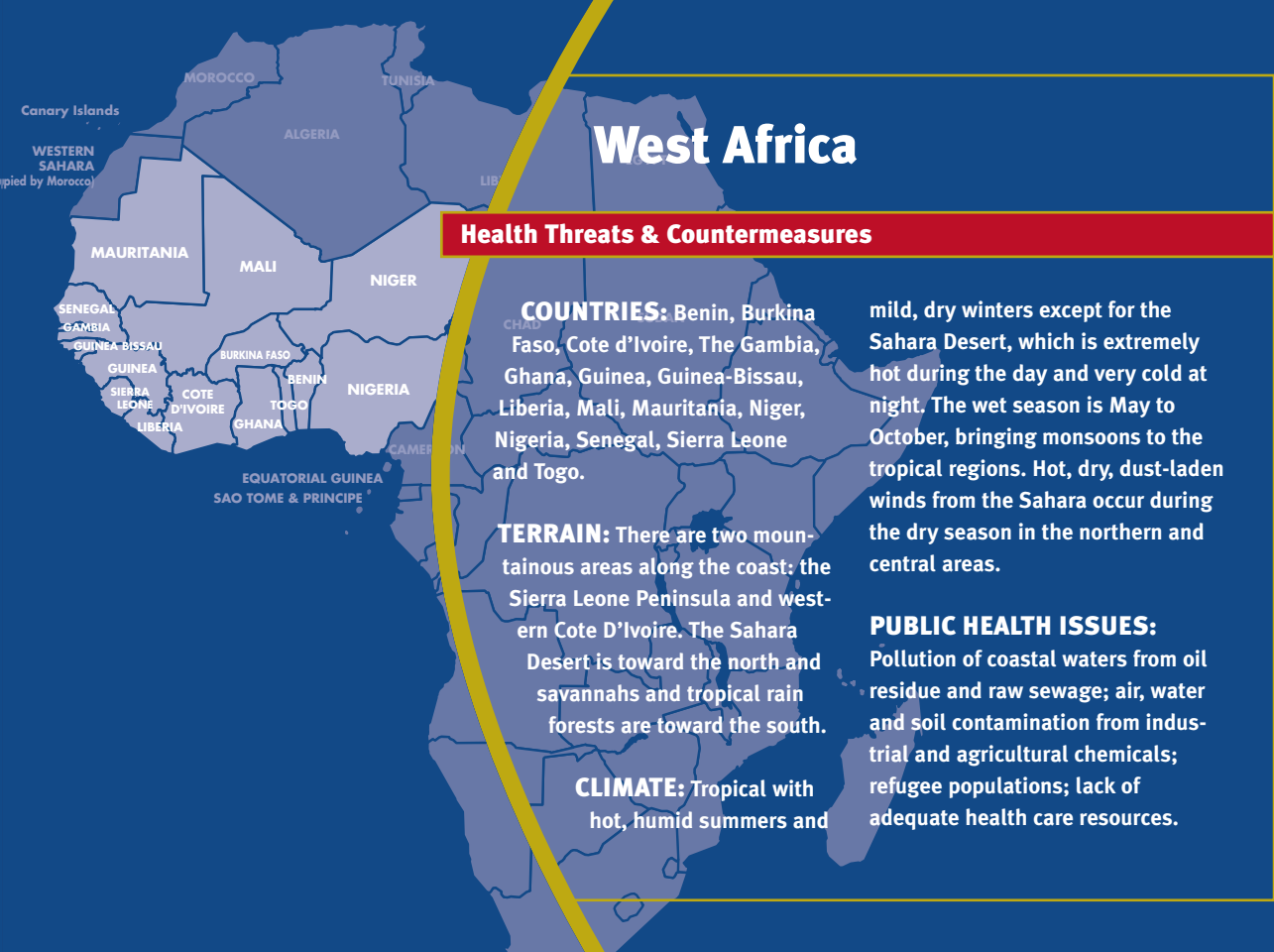
### **Diseases/Hazards from Animals**

Rabies, a fatal disease resulting from the bite or scratch of a rabid animal, occurs infrequently. Four species of poisonous snakes plus poisonous centipedes and spiders exist in Korea.

*When possible, avoid contact with snakes, centipedes, spiders and all animals. Seek immediate medical attention if bitten, stung or scratched.*

*Avoid contact with domestic (cats, dogs), farm and wild animals. Do not feed, handle or keep animals as pets or mascots.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in training or fighting positions for potentially dangerous animals and insects.*



# West Africa

## Health Threats & Countermeasures

**COUNTRIES:** Benin, Burkina Faso, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.

**TERRAIN:** There are two mountainous areas along the coast: the Sierra Leone Peninsula and western Cote D'Ivoire. The Sahara Desert is toward the north and savannahs and tropical rain forests are toward the south.

**CLIMATE:** Tropical with hot, humid summers and

mild, dry winters except for the Sahara Desert, which is extremely hot during the day and very cold at night. The wet season is May to October, bringing monsoons to the tropical regions. Hot, dry, dust-laden winds from the Sahara occur during the dry season in the northern and central areas.

**PUBLIC HEALTH ISSUES:** Pollution of coastal waters from oil residue and raw sewage; air, water and soil contamination from industrial and agricultural chemicals; refugee populations; lack of adequate health care resources.

# West Africa

## ■ DISEASES

### Airborne Diseases

Respiratory diseases of greatest concern are meningococcal meningitis and tuberculosis. Meningococcal meningitis is an extremely serious, often fatal disease that can be contracted through close contact with the respiratory secretions of a person carrying the bacteria, as through a cough or kiss. TB can be contracted by breathing in the TB bacteria coughed or sneezed into the air. Because of the potential for crowded living conditions, stressful working conditions and exposure to infected persons in the local population, military personnel are particularly susceptible to diseases that are spread by the respiratory route.

*Avoid close contact with local population in crowded and enclosed spaces.*

*Avoid overcrowding in living areas; ensure good ventilation; sleep head-to-toe; cover nose and mouth when coughing/sneezing.*

### Food- and Water-Borne Diseases

Local food and water sources (including ice) can be heavily contaminated with

pesticides, fertilizers, chemicals and human or animal waste. Consuming contaminated items even once may cause severe illness. Service members are at greatest risk for: bacterial and protozoal diarrhea, hepatitis A and typhoid/paratyphoid fever. Other potential diseases are cholera, hepatitis E and brucellosis (which can be contracted by consuming unpasteurized dairy products). Nigeria and Niger are two of the few remaining countries with poliovirus.

*Consume only food, water and beverages (including bottled water and ice) from approved US military sources.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### Vector-Borne Diseases

Vector-borne diseases posing the greatest threat are malaria and yellow fever, which are transmitted through the bite of a mosquito. Other mosquito-transmitted

diseases include: (chikungunya virus, Rift Valley fever, Sindbis (Ockelbo) and West Nile fever). Other insects whose bite can transmit disease include: ticks (Boutonneuse fever, also known as Mediterranean spotted fever and Crimean-Congo hemorrhagic fever); fleas (murine typhus); sand flies (cutaneous and rarely visceral leishmaniasis); and tsetse flies (trypanosomiasis).

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Taking malaria pills as directed is critical. Normally, you will begin taking medication prior to arriving in the area, while in the area and for several weeks after returning home. An additional type of malaria medication may be added for 2 weeks when you return home.*

*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply*

*sunscreen first, then wait 30 to 60 minutes and apply DEET.*

- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

*Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.*

*Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)*

*Seek medical attention for lesions on exposed skin that do not heal.*

### **Water- and Soil-Contact Diseases**

Schistosomiasis and leptospirosis are diseases that can be contracted by swimming, wading or other skin contact with water or damp soil contaminated with the disease organisms. Lassa fever is a soil-contact disease that can be contracted by contact with the virus usually by breathing in soil or dust contaminated with rodent droppings.

*Avoid swimming, bathing or wading in natural bodies of fresh water (mission per-*

*mitting). If you must be exposed, wear protective clothing and footwear. Towel dry skin vigorously and clean clothing afterwards.*

*Never go barefoot.*

*Try not to inhale dust or dirt in areas that have been inhabited by rodents.*

*Keep skin clean and dry to prevent skin infections that thrive in moist conditions.*

### **Sexually Transmitted Diseases**

Human immunodeficiency virus (HIV) and hepatitis B (potentially fatal diseases that can be transmitted sexually and by contaminated needles) are very common in West Africa. Other STDs include gonorrhea and chlamydia.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles. Seek medical care only from US military approved sources.*

### **■ ENVIRONMENTAL EXPOSURES**

#### **Sand, Wind and Dust**

Severe sandstorms and dust storms are common throughout the region. Sand,

wind and dust can dry out the nose and throat, cause nosebleeds, coughing and wheezing, and chap the skin. Body areas that collect dust and sand are susceptible to chafing, abrasion and infection. High winds can turn loose objects into flying projectiles.

*Shield your face with cloth materials and your eyes with goggles to protect them from blowing dust and sand. (Wearing contact lenses is prohibited.)*

*Wash your face and eyelids several times daily using an approved water source. If possible bathe daily; if not, use a washcloth to at least wash private areas, armpits, feet.*

*Breathe through a wet cloth, or coat the nostrils with a small amount of petroleum jelly to decrease drying of mucous membranes. Use lip balm to protect your lips and moisturizing lotion to protect your exposed skin. Wear gloves to protect your hands.*

*If you already take medicine for asthma or other breathing conditions, take extra medication (at least a 90-day supply) with you.*

## Heat, Cold and Altitude

Heat is the greatest overall threat, particularly in unacclimatized individuals. The desert can become extremely cold at night. Operations at altitudes over 6000 feet can cause serious illness or death if you are not acclimatized. Heat, wind, dry air and higher altitude increase the daily water requirement.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

*When deployed to high mountain areas, watch for the symptoms of mountain sickness (headache, nausea, vomiting, dizziness, fatigue, irritability and coughing). Seek medical attention immediately for any of these symptoms.*

## Hazardous Materials

Localized air, water and soil pollution from industrial facilities and agricultural chemicals as well as exposure to toxic chemicals resulting from improper handling/disposal of hazardous materials used by our own forces are also possibilities.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

*Avoid working or bivouacking in or around industrial sites whenever possible.*

## Diseases/Hazards from Animals/Plants

Diseases which can be transmitted from animal to man include: rabies, a fatal disease contracted from the bite/scratch of a rabid animal; anthrax, from touching or eating infected animals or inhaling dust that contains anthrax bacteria; and Q fever, also caused by inhaling contaminated dust. Many species of highly poisonous snakes and some potentially lethal scorpions and spiders live in the

region. Hazardous plants include plants with thorns, stinging hairs and toxic resins that can puncture the skin and cause rashes or infection. Some species of plants are poisonous if chewed or swallowed. If these plants are burned, the smoke can cause skin rashes or lung damage.

*When possible, avoid contact with snakes, spiders and all animals. Seek immediate medical attention if bitten, stung or scratched. Avoid contact with unfamiliar plants.*

*Wash skin and clothing after contact with animals, dust from around animals and hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in training or fighting positions for potentially dangerous animals and insects.*

*Avoid areas currently or previously inhabited by animals, including rodents.*

# US Domestic Deployments

## Health Threats & Countermeasures

**COUNTRIES:** United States (50 states); District of Columbia; Puerto Rico; the US Virgin Islands; Guam; American Samoa; and the Northern Mariana, Midway and Wake Islands.

**TERRAIN:** The Continental US (CONUS) varies from eastern coastal plain, central flatland and the Great Plains sloping upward to the Rocky Mountains. Puerto Rico and the US Virgin Islands (53 islands), located in the Caribbean Sea, are mostly mountainous/hilly islands with coastal beaches.

Hawaii and the other territories are islands located in the Pacific Ocean.

**CLIMATE:** Alaska – subarctic/arctic with long cold winters and brief mild summers. CONUS: eastern 2/3 – humid climate with four seasons; southern region – warmer average temperature; western interior – mountain and desert country with much local variation based on altitude; and narrow zone along Pacific Ocean – mild but wet winters and almost rainless summers. Hawaii and all the other islands have a tropical/subtropical climate with little seasonal variation.

# US Domestic Deployments

## ■ DISEASES

### Airborne Diseases

Seasonal outbreaks of influenza, a viral respiratory disease spread by breathing in the virus coughed or sneezed into the air or by touching a surface with flu viruses on it and then touching your nose or mouth, occur in the US and worldwide. Severe acute respiratory syndrome (SARS) is a new viral respiratory disease that spreads like influenza but as of this date has only occurred in US travelers who contracted SARS in other countries.

### Food- and Water-Borne Diseases

Food- and water-borne illnesses can occur anywhere if food and water becomes contaminated or is not handled properly. Traveler's diarrhea, caused by consuming contaminated food or water, is the number one illness of travelers. Consuming contaminated items, even once, may cause severe illness. Diseases caused by contaminated food or water include: bacterial and protozoal diarrhea, hepatitis A, typhoid fever, cholera and

brucellosis. Most of the water and sewage systems in the US territories are adequate. However, to be safe, assume all food and water sources are not safe unless cleared by US authorities. Ciguatera poisoning can result from contaminated reef fish in Caribbean coastal waters.

*In US territories, consume only food, water and beverages (including ice and bottled water) approved by US military sources. Don't eat or drink unpasteurized dairy products. Eat only thoroughly cooked food or fruits and vegetables you have peeled yourself. Remember: boil it, cook it, peel it or forget it.*

*Clean hands thoroughly using soap and approved water source or approved hand cleansers before touching your face or eating, and after using the latrine. Keeping hands clean helps protect against spreading food-, water- and airborne diseases.*

### Vector-Borne Diseases

In CONUS, diseases transmitted by insects include: ticks (Lyme disease,

Rocky Mountain spotted fever, tularemia, human ehrlichiosis); mosquitoes (West Nile Virus, arthropod-borne encephalitis); deerflies (tularemia); mites (chiggers) (rickettsialpox); and fleas (plague). Dengue fever, transmitted by mosquitoes, is a significant threat in the Caribbean and is present in the Pacific. Lymphatic filariasis (elephantiasis), a disease caused by thread-like parasitic filarial worms and spread by mosquitoes, and murine typhus, spread by rat fleas, is present in the Pacific and the Caribbean. Cutaneous (rarely visceral) leishmaniasis, transmitted by sand flies, is present in the Caribbean.

*Listen to advice of local medical authority on threat in your area and recommended countermeasures.*

*Use the DoD Insect Repellent System, including:*

- *Wearing permethrin-treated uniforms with trousers bloused and sleeves down.*
- *Using DEET on exposed skin. When using DEET and sunscreen, apply sunscreen first, then wait 30 to 60 minutes and apply DEET.*



- *Sleeping under permethrin-treated bed net. (Many insects feed at night.)*

*Examine clothing and skin for ticks, mites (chiggers) and fleas regularly and promptly remove them.*

*Avoid areas with signs of current or previous rodent infestation. (Rodents may carry infected fleas and mites.)*

*Seek medical attention for lesions on exposed skin that do not heal.*

### **Water- and Soil-Contact Diseases**

Leptospirosis and schistosomiasis are diseases that can be acquired from swimming, wading or other skin contact with contaminated water. Leptospirosis, found worldwide, results from contact with water or damp soil contaminated with the urine of infected animals. Schistosomiasis, found in the Caribbean and Pacific, is caused by contact with fresh water inhabited by infected snails. Coccidioidomycosis is caused by inhaling fungal spores found in soil in hot dry areas in the western US. Histoplasmosis is caused by inhaling a

fungus usually found in soil enriched by accumulations of bat or bird droppings mostly in the central and southeastern US. Hantavirus pulmonary syndrome can result from inhaling dust contaminated with rodent urine/droppings mainly in southwestern US.

*Avoid swimming, bathing or wading in natural bodies of fresh water (mission permitting). If you must be exposed, wear protective clothing and footwear. Towel dry skin vigorously and clean clothing afterwards.*

*Never go barefoot.*

*Keep skin clean and dry to prevent skin infections that thrive in moist conditions.*

*Try not to inhale dust or dirt in areas that have been inhabited by rodents or in areas with accumulations of bat or bird droppings.*

### **Sexually Transmitted Diseases**

STDs are found in every area in the world. Human immunodeficiency virus (HIV) and hepatitis B are potentially fatal

STDs that can be transmitted both sexually and by contaminated needles. Gonorrhea and chlamydia are the most common STDs.

*Avoiding sexual activity is the only 100% effective preventive measure. If engaging in sex, always use a latex condom. Avoid contact with previously used needles.*

### **■ ENVIRONMENTAL EXPOSURES** **Heat, Cold and Altitude**

Heat is a threat in CONUS in the summer and year-round in the Caribbean and the Pacific. Cold is a threat in Alaska, the mountains and in winter in northern CONUS. Operations at altitudes over 6,000 feet can cause serious illness or death especially if unacclimatized. Heat, wind, dry air and higher altitudes increase the daily water requirement.

*Consume prescribed amounts of water daily and follow prescribed work/rest cycles.*

*Ensure that you wear the appropriate clothing to protect against sun, wind, cold and wet weather. Wear sunscreen, lip*

*balm and protective eyewear as protection from sunburn.*

*Wear clothing loose and in layers as protection from the cold. Keep clothing clean and as dry as possible. Insulate yourself from the ground and wind. Avoid overheating.*

*When deployed to high mountain areas, watch for the symptoms of mountain sickness (headache, nausea, vomiting, dizziness, fatigue, irritability and coughing). Seek medical attention immediately for any of these symptoms.*

### **Hazardous Materials**

Exposure to toxic chemicals resulting from industrial pollution, terrorist activities or improper handling/disposal of hazardous materials used by our own forces is a possibility.

*Consult your medical authority for specific information for your area of operation.*

*Ensure proper handling and disposal of hazardous materials/wastes.*

### **Diseases/Hazards from Animals/Plants**

Diseases that can be transmitted from animal to man include: rabies, a fatal disease contracted from the bite/scratch of a rabid animal; anthrax, a disease that can be contracted from touching or eating infected animals or inhaling dust that contains the anthrax bacteria; Q fever, also caused by inhaling contaminated dust; and tularemia, which can be contracted by handling or eating infected rabbits, hares or rodents, inhaling contaminated soil, or by insect bite. Rabies is found in North America and Puerto Rico. Anthrax and Q fever are found worldwide. Tularemia is found in North America. Highly poisonous snakes are found in CONUS. Although many islands have no venomous snakes, to be safe avoid contact with any snake. Spiders, scorpions and centipedes are also a threat. Dangerous animals present in Caribbean coastal waters include poisonous fish, stingrays, stinging jellyfish, crocodiles and caimans. Africanized honeybees are a threat throughout the Caribbean.

Hazardous plants (e.g. poison ivy) include plants with thorns, stinging hairs and toxic resins that can puncture the skin and cause rashes or infection. Some species of plants are poisonous if chewed or swallowed. If these plants are burned, the smoke can cause skin rashes or lung damage.

*When possible, avoid contact with snakes, scorpions, spiders and all animals. Seek immediate medical attention if bitten, stung or scratched. Avoid contact with unfamiliar plants.*

*Wash skin and clothing after contact with animals, dust around animals and hazardous plants.*

*Shake out boots, bedding and clothing prior to use, and never walk barefoot. Always check dug-in training positions for potentially dangerous animals and insects.*

*Avoid areas currently or previously inhabited by animals, including rodents.*



**News.  
Resources.  
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[www.PDHealth.mil](http://www.PDHealth.mil)

**Additional information** can be found at the following websites:

- [www.PDHealth.mil](http://www.PDHealth.mil)
- <http://chppm-www.apgea.army.mil>

or by calling the DoD Helpline for Service Members, Veterans and Families:

- toll free inside the U.S. at 1-800-796-9699;
- toll free from Europe at 00800-8666-8666;
- in Washington, DC at 202-782-3577 (DSN 662);
- or outside US DSN at 312-662-3577.

**DoD immunization guidance** can be found at:

- <http://www.vaccines.army.mil/summary.asp>