



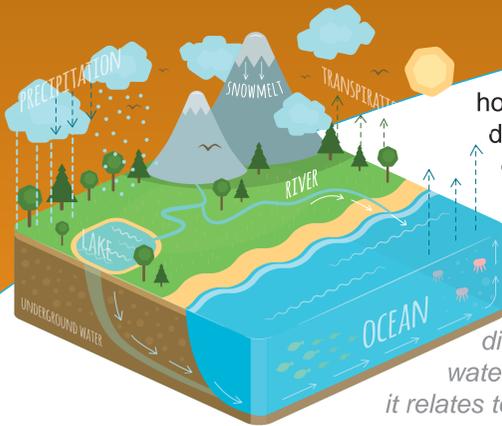
What are FLOODS



Inland flooding results from heavy and prolonged rainfall, when the water level in rivers and streams rises over the banks and inundates the surrounding land. There are three different types of flooding:

- Flash Floods occur within a few hours of heavy rain with little or no warning and dissipate rapidly. This is the most common form of flooding in Pacific Island countries.
- Rapid-Onset Floods occur within several hours of heavy rainfall, can last several days and are specific to medium-sized river catchments.
- Slow-Onset Floods occur gradually over a fairly long period of time and are only characteristic of large river systems.

Coastal flooding is a separate hazard which occurs when storm surges, waves and/or extremely high tidal levels inundate low-lying coastal areas.



A simple diagram of water cycle as it relates to flooding

River flooding is a frequent risk to high volcanic Pacific Island countries due to high rainfall, small river catchment areas and low lying coastal areas. Whilst floods cause considerable damage to people and property, however, there are some benefits of flooding which include an increase in soil fertility due to sediments being deposited on flood plains, pollutants being washed away and groundwater being replenished. However, currently our knowledge of Pacific Island river system behaviour remains poor.

Nadi Flood – 4th April, 2016.



What Causes Flooding?

Many factors influence the intensity of a flood:

- Rainfall intensity and duration
- Steepness of terrain
- Water levels and moisture conditions preceding the rains.

- Increased runoff due to deforestation
- Capacity of rivers, streams and drainage networks.
- High tide levels preventing river drainage.

Flood Hazard.

Floods disturb fragile island economies by affecting individuals, businesses, insurance companies and governments. The costs of flooding are high. For example, Fiji's economy suffers annual losses of some FJ\$20million on average due to flooding.

days and people need to be evacuated from flooded areas, sometimes for weeks.

People and property. Floods have tremendous impacts to life and property, with 10 people on average being killed every year in Fiji alone, Buildings, personal belongings and stock get washed away or seriously damaged by muddy water. Businesses and services become disrupted for several

Livestock and crops. Animals and crops get drowned and washed away and sometimes soil is saturated for months afterwards, preventing new planting.

Health hazards. Spread of epidemics such as cholera is frequently associated with floods due to the flooding of septic tanks and sewerage systems contaminating drinking water.



What you can do before, during and after a flood

PREPARE FOR A FLOOD

- Learn all you can about previous floods in your area and about possible warning signs and systems
- Keep an eye on the weather conditions; listen to the weather forecast and follow flood warnings.
- Keep to hand materials such as lumber, plywood, nails, rope, wires, plastic sheeting, sandbags, etc.
- Keep to hand a portable radio, spare batteries and an emergency kit.
- Store all chemicals away from the reach of flood waters.
- Store livestock feed and supplies above expected water levels. Ensure safety of pets.

UPON HEARING A FLOOD WARNING:

- Listen for emergency instructions.
- Ensure all your family members are present
- Watch for rapidly rising water
- Store drinking water in sealed plastic containers as water supply may be interrupted
- Move livestock to higher ground
- Move household items to higher levels. Secure objects that could float and cause damage.
- Evacuate if necessary when it is safe to do so. If crossing flood waters, move slowly to avoid losing your footing.
- Turn off electricity at the main switch before evacuating

DURING A FLOOD

- Avoid areas prone to flash flooding
- Don't attempt to cross rivers or streams where water is above knee level
- Beware of water-covered roads and bridges
- Never allow children to play around high water or storm drains
- Animals can swim well. Do not leave them in confined areas or pens. Open gates so that animals can escape

AFTER THE FLOOD

- Re-enter buildings with caution. Use flashlights, NOT lanterns with open flames in case of flammable gas inside.
- Be alert for fire hazards such as broken electrical wires.
- If the building has been under water, do not switch on the main, wait for professional assistance. Never touch electrical switches while wet or standing in water.
- Don't use appliances or equipment until they have been cleaned, dried and thoroughly checked for damage.
- Report damaged utility lines (electricity, water, gas and telephone) to the appropriate authorities.
- Boil all water and don't eat left-over food until it is checked for contamination.
- Keep away from disaster areas.

Cyclone Ami in 2003 cost Fiji's agriculture sector alone FJ\$66million. The floods killed 17 people and there were outbreaks of diarrhoea, dengue fever, leptospirosis and typhoid.



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