

# Natural disasters

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## Introduction

The Republic of Mauritius is located in a region which is vulnerable to multiple natural disasters.

These can give rise to significant loss of life and damage to property.

## Tropical Cyclone

The most common and destructive natural disaster is tropical cyclone. The cyclonic season officially starts on 15 November and ends on 15 May. On average, 10 formations occur in the South West Indian Ocean. Almost every year, a tropical cyclone passes within 100 km of Mauritius and Rodrigues. Occasionally, they are hit directly by an intense cyclone with winds exceeding 200 km/h and torrential rain causing considerable damage valued at million of rupees. Such rains often cause landslides. An effective and efficient warning system is in place. With better communication and dissemination system, the number of death has decreased.

Tropical cyclone is a necessary evil. It brings much water. About 60% of the annual rainfall in Mauritius depends on cyclones.



Source NAAA: Intense tropical cyclone Felleng on 29 January 2013

More information on cyclone warning system for Mauritius and Rodrigues can be obtained on the Mauritius Meteorological Service website (<http://metSERVICE.intnet.mu/?cat=20>).

## Torrential rain

Torrential rain occasionally occurs in Mauritius and Rodrigues. It can be caused either by the passage of a tropical cyclone, the Intertropical Convergence Zone (ITCZ) moving more southwards from its normal position along the latitude of the Mascarene islands, an active sea breeze during the summer months or an active wave in the trade winds. The ITCZ is a tropical feature where South easterly winds from the Southern Hemisphere and North easterly winds from the Northern Hemisphere meet and may cause cloud formation.

Torrential rain can cause flash floods and water accumulations in flood prone areas. It can give rise to rivers overflow and landslides. A torrential rain warning is issued when 100 millimeters of widespread rains has occurred in less than 12 hours and is likely to continue for several hours. More information is available on the Mauritius Meteorological website (<http://metSERVICE.intnet.mu/>).

## Storm surge

Storm surges, besides from tropical cyclones, originate from travelling deep low pressures well to the south of the Mascarene Islands. They travel almost 2500 km before hitting the islands and can give rise to waves over 5 m in height. In Mauritius, the southern and south western regions are most affected. In the region of Rivière des Galets, in spite of the construction of

seawalls and placement of gabions, an effective mechanism to protect settlements from occasional storm surges is yet to be designed. Notable storm surges occur in May 1976, May/June 1987, September 1995 and May 2007. The storm surge of 1987 is reported to have affected Seychelles and travel as far as Pakistan.

## Tsunami

The word tsunami has become a household name since the most deadly tsunami of December 2004 which caused more than 250 000 death in 14 countries bordering the Indian

Ocean. It is series of waves which are generated by a powerful earthquake under the sea. More information can be obtained from the section on Tsunami.

## Drought

Severe drought in the region of the Mascarene islands is rare. It usually occurs when the summer rainfall is well below average. The most

recent drought was in 1998 when the summer rainfall was only 20% of the average rainfall.

## Other natural disasters

Other natural disasters include earthquake on the mid ocean ridge giving rise to slight tremors in Rodrigues, heat waves during the summer

months, mini tornadoes during severe weather and epidemics such as 'chikungunya' and vectors borne diseases

## ADD contribution

Natural disaster is one the topics of the sensitization programme targeted to school

children and the communities.

## Glossary

### ***Natural disaster***

A natural disaster is a major natural event that may cause serious social, economic and environmental damage. Examples of natural disasters include tropical cyclone, flood, drought, landslide, heat wave, blizzard,

earthquake or tsunami. The extent of the damage depends on the vulnerability of a population and its ability to recover depends on its resilience.

### Tropical cyclone

A tropical cyclone is a storm system characterized by a low-pressure center surrounded by a spiral arrangement of

thunderstorms that produce strong winds and heavy rain. In the Southern Hemisphere, the spiral turns in a clockwise direction.

### Torrential rain

Torrential rain generally refers to very heavy rains that fall over a relatively long time period and may be accompanied by high winds and lightning. Some of the hazards caused by torrential rains include flash

floods, flooding and landslides. In Mauritius, torrential rain warning is issued when 100 millimeters of widespread rains has occurred in less than 12 hours and is likely to continue for several hours.

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### Quizz

a) Name three natural disasters.

1. ....
2. ....
3. ....

b) Name two human-induced disasters.

1. ....
2. ....

c) Human-induced disasters are also known as .....disasters.

d) Going out in a cyclonic weather is not recommended because we can be injured. We are said to be vulnerable or at risk from broken objects and flooding (*True or false*).

e) What are different phases of cyclone warnings in Mauritius?

- .....  
.....

f) Vulnerability means to be at risk or in danger from disasters. (*True or false*)

g) Mitigation is a means to reduce risk to avoid harm from danger. (*True or false*)

h) We can also reduce damage caused by natural and environmental disasters by :

1. building houses resistant to cyclones (*True or false*)
2. having a good drainage system where there are floods (*True or false*)
3. building stone walls to prevent coastal erosion (*True or false*)

i) Flood can be prevented by:

1. Throwing garbage in rivers and drains. (*True or false*)
2. Building houses across canals and streams. (*True or false*)

j) Landslide can be prevented by:

1. Planting more trees on mountain slopes. (*True or false*)
2. Building roads and houses on mountain slopes. (*True or false*)

k) We can reduce the erosion of the coast by:

1. Preserving coral reefs (*True or false*)
2. Planting mangroves on the coast.  
(*True or false*)

3. Removing sand from the beaches.  
(*True or false*)

4. Planting filao trees and other vegetation near the beach (*True or false*)