

ABOUT FLOODS

Background reading

The extract below comes from the Australian Emergency Management Institute, and can be accessed at <http://schools.aemi.edu.au/about-floods>

Floods occur when water covers land which is normally dry. They are not always caused by heavy rainfall.

Floods may be caused by prolonged or very heavy rainfall, severe storms or tropical cyclones, and the monsoonal (wet season) rains in the tropics.

Flooding can also be caused by other events, such as snow-melt and dam failure.

In the coastal regions of Australia, floods can also be caused by the sea. Seawater flooding can happen during storm surges, king tides and tsunamis.

People who live close to rivers, creeks, major stormwater drains and low-lying areas are usually most at risk from flooding. Heavy rains and storms in one area can cause flooding in another town. When the water levels of local rivers and streams overflow, they can sometimes spill out over thousands of kilometres of the surrounding region.

Flooding can be caused by a range of situations that include:

- ▶ Seawater flooding – coastal areas may be flooded when a cyclone or severe storm causes a surge of sea water,
- ▶ Tidal flooding – floods that are caused by high tides that coincide with higher than normal river levels,
- ▶ Run-off from rivers and dams – flooding can be caused when river systems need to carry more water than usual following a snow-melt or when dams start to overflow,
- ▶ Urban drainage – flash flooding is a serious problem in some cities when the drainage systems fail. People can be caught in stormwater drains, trapped in their cars or even swept off the roads by water

Is it always bad news?

Floods can have both positive and negative impacts. Sometimes floods can bring welcome relief for people, livestock and areas experiencing drought conditions.

Flooding can also be a natural way for wetland areas, swamps and native waterways to survive. Underground aquifers and soils with high salt levels also benefit from floods.

Types of floods

There are three common types of floods that affect Australia:

Slow-onset floods

Inland rivers in the vast flat areas of Western Australia, central/western New South Wales and Queensland can often flood. These floods may take days to build-up. They can last for one or more weeks and can even last for months on some occasions.

The damage caused by floods in these areas can lead to major losses of livestock, cutting off rural towns and damaging crops, major roads and railways.

Rapid-onset floods

Rapid-onset flooding occurs more quickly than slow-onset floods. These floods can potentially be much more damaging and can pose a greater risk to loss of life and property. This is because there is generally much less time to take preventative action from a faster, more dangerous flow of water. This type of flooding can affect most of our major towns and cities.

Flash floods

Flash flooding results from relatively short, intense bursts of rainfall, often during thunderstorms. It can occur in almost all parts of Australia and poses the greatest threat to life. People are often swept away after entering floodwaters on foot or in vehicles. These floods can also result in significant property damage and major social disruption. They are a serious problem in urban areas where drainage systems are often unable to cope. These are the type of floods that we experience in the Cairns region.