

# Floods

## BACKGROUND READING

### **Floods cause millions of dollars in damage in Australia every year**

Flooding affects buildings and critical infrastructure, such as roads and railways as well as agricultural land, livestock and crops.

Floods also cause major disruptions to business and can affect the health of communities. Sometimes towns can be cut-off, resulting in people needing to be evacuated and emergency services beginning relief efforts.

### **Community flood prevention and reduction**

Many communities have flood prevention or reduction strategies such as:

- ▶ restricting the building of houses on floodplains,
- ▶ use of dams,
- ▶ building of levees and flood diversion devices,
- ▶ flood-proofing homes,
- ▶ raising homes and businesses in known flood areas.

It is important to know your local flood history. Knowing your local flood plan, when you may need to evacuate and how to get to your nearest safe location can save lives.

### **Flooding In Australia**

Floodwaters can affect many Australian towns, areas and even cross borders. Here are some of Australia's biggest floods.

#### **Flood, Queensland, 30 November 2010**

In late November 2010, rain began falling in Queensland. By January 2011 extensive flooding had occurred to 75 per cent of the state and a disaster zone was declared. In total, 33 people lost their lives in these flood and cyclone events.

On 25 December 2010, Cyclone Tasha crossed the northern Queensland coast and brought flooding to major river systems in Queensland.

On 10 January 2011 a wall of water swept through Toowoomba, then travelled west, flooding the towns of Oakey, Dalby, Chinchilla and Condamine for a second time, causing flooding through the Lockyer Valley, including Murphy's Creek, Postman's Ridge, Helidon, Grantham, Laidley, Lowood, Fernvale and Forrest Hill.

The floodwaters affected Brisbane River systems, reaching heights that engulfed several towns and suburbs of Brisbane.

During this period approximately 3572 businesses were inundated.

There were 5900 people evacuated from 3600 homes. Commercial loss was approximately

\$4 billion across the mining, agriculture and tourism sectors. Nineteen thousand kilometres of roads were damaged. Three major ports were significantly affected. More than 28 per cent of the Queensland rail network was left twisted and displaced. An estimated 28,000 homes needed to be rebuilt while vast numbers of dwellings required extensive repairs.

The judicial inquiry into these floods started on 10 February 2011, a final report was published in March 2012.

The Insurance Council of Australia estimated the 2011 damage at \$2.38 billion.

#### **Flood, New South Wales - Coffs Harbour, 1996**

A devastating flash flood hit Coffs Harbour when 168mm of rain (and up to 300mm in the area) fell in 2 hours on 25 November 1996.

##### **Flash flooding**

The November 1996 flood caused widespread devastation to property located on low-lying land beside the Coffs Creek. Around 260 residential homes and 200 commercial properties were inundated above floor level during this flash flood.

##### **Flood damage, injuries and deaths**

One woman died when she was swept more than one kilometre from her home and into the sea. Over 500 homes and 100 businesses were damaged and 300 people were evacuated. The flood caused extensive damage to roads and a natural disaster was declared with more than 800 properties flood affected. Part of the local banana crop was also destroyed due to erosion and landslides. The damages were estimated to be more than \$140 million.

#### **Flood, Mackay, 14 February 2008**

During the period 10 - 18 February 2008, a number of towns were seriously affected by severe weather including Townsville, Bundaberg, Mackay, Rockhampton, Airlie Beach, Proserpine, Cooktown, Cairns and Ingham. Heavy rainfall and flooding resulted in widespread damage. There was damage to state infrastructure, buildings and houses, and in Mackay alone 4000 houses were inundated from flood water. The agriculture and horticulture industries suffered heavy losses.

The Insurance Council of Australia estimated the 2008 damage at \$410 million.

#### **The Great Floods - New South Wales, Queensland and Victoria, 1990**

The 1990 floods in eastern Australia were huge. The total area flooded was estimated to be more than one million square kilometres. That's an area larger than Germany.

##### **Rainfall, river systems and flooding**

In central-northern New South Wales and central-

# Background

Classroom resources provided by Cairns Regional Council



southern Queensland, continual heavy rains partly caused by cyclones, drenched the flat inland plains. Further torrential rainfall created almost instant floods. Many rivers had already flooded once and were in flood again, this time at even higher levels.

The many flooded river systems around northern New South Wales and southern Queensland made flood height prediction difficult. Residents of Nyngan, on the Bogan River, strengthened levee banks in expectation of a record flood height, but the flood waters exceeded the levees. Almost every building in the town was flooded. Almost 2500 people were evacuated, mainly by helicopters, under emergency conditions as all town services were lost.

### ***Flood damage, injuries and deaths***

Across the three affected states, the Great Floods of 1990 claimed seven lives, caused 60 injuries and left 5000 people temporarily homeless. The total estimated cost of these floods was \$415 million (1997 values). Most of this damage was insured.

Road and rail links were severed for a long time and many residents could not return to their homes for three weeks or more. A huge 'tent city' was established at Charleville Airport after the hospital was evacuated. More than 2000 residents were evacuated by boat and by air evacuation (mainly by helicopters).

### **Flood, Queensland - Brisbane, 1974**

This major flood was caused by the weakening Cyclone Wanda which crossed the Queensland coast 150 kilometres north of Brisbane on 24 January 1974. The cyclone caused only minor wind damage, but created heavy rains over Brisbane for five days.

### ***Rainfall and record flooding***

Before Cyclone Wanda came ashore, there was already some flooding in and around Brisbane. Among the highest rainfall recordings were 1318mm (1.3 metres), whilst in Brisbane itself 819mm of rain fell. Many houses bordering rivers and creeks were washed away as rivers rose to their highest levels since the disastrous 1893 floods.

### ***Flood damage, injuries and deaths***

During the 1974 floods, 16 people died, 300 people were injured, 8000 people were made homeless and 56 homes were swept away. Approximately 1600 homes were submerged by the floodwaters.

At the height of the flood ships were torn from their moorings. A large oil tanker on the Brisbane River was damaged and the total damage bill was estimated to be around \$980 million.

### **When was the last major flood in the Cairns Region?**