



Core units: Exemplars – Year 7

Illustration 4: Flooding in south-east Queensland

## Low pressure systems and La Niña bring flooding rains to Queensland

### Development of summer low pressure systems

Located in the tropical and sub-tropical north of the continent, Queensland comes under the influence of low pressure systems that develop during summer. This is because the sun is directly over the Tropic of Capricorn as the southern hemisphere is facing towards the sun. Thus the sun's rays are striking the earth directly, causing intense heating. As the warm air rises in convection currents it cools, and the water vapour contained within it condenses, producing rain. Hence low pressure systems bring unstable weather and heavy rains to Queensland in summer.

### La Niña events in Australia

La Niña is a climate phenomenon which causes floods, massive cyclones and endless rain. La Niña events are accompanied by warmer ocean temperatures off the east coast of Australia. This warms the air above the ocean which causes more evaporation and increased convection currents producing low pressure systems. Thus air blowing off the sea onto the land is loaded with moisture, and as it is caught up in the rising air of low pressure systems, it produces heavy rain.