

## 3.12 Reducing the damage from wildfires

### How do people respond to a wildfire?

In areas that are accessible to fire engines, fire-fighting teams spray them with water and foam. Aeroplanes and helicopters are also used to allow firefighters to land at or even parachute into remote, inaccessible areas. They are also used for **air drops**, where water and fire-retardant chemicals are released from aircraft onto the wildfire. Areas ahead of the wildfire are also sprayed to stop it spreading. Helicopters are fitted with a large bucket that can be filled up from the sea or a nearby lake (Photo **A**).

Firefighters also create **fire lines** (also called fire breaks), which act as a barrier to stop the spread of the wildfire. They dig trenches, or clear areas of ground. This removes dry grasses, bushes, leaves and twigs which act as fuel for the wildfire. Without a supply of fuel the wildfire will eventually burn out. In accessible areas this is done using bulldozers, but it often has to be done by hand, using a tool called a **pulaski**. Sometimes a **backfire** is used to remove the fuel: this is where an area ahead of the wildfire is set alight and a controlled burning of the fuel supply takes place. This clears the area very quickly, but there is always the risk that the second fire could get out of control and spread.

In severe wildfires, where many lives could be at risk, people are made to evacuate their homes and move to safe areas. This called a mandatory evacuation, which can be enforced by arrest in some areas.

### How do people prevent and prepare for a wildfire?

Volunteer groups remove dead leaves and branches from areas at risk from wildfires and controlled burns take place in order to remove dead plant material before any fires start. However, the best method of prevention is to educate the public through campaigns designed to increase awareness of how wildfires can start.

The Smokey Bear cartoon character (Photo **B**) has been used for over 60 years in the USA to advise people on how to build campfires and how to extinguish them safely. Advice on burning crop debris, reducing



**B** Smokey Bear

#### In this section you will learn:

the ways in which people can respond to a wildfire

the ways in which people can prevent and prepare for a wildfire.



**A** An air drop

#### Key terms

**Pulaski:** a tool that is a cross between an axe and a hoe.

**Geographical Information System (GIS):** electronic system used for storing, analysing, managing and presenting data, which is linked to a location.

#### Did you know ??????

Aeroplanes drop a bright pink sludge onto wildfires. In the USA, this is known as 'Sky Jell-O' (jelly).

#### AQA Examiner's tip

Be able to describe the measures people can take to prevent and prepare for wildfires.

the risk of sparks from vehicles and disposal of cigarettes appears on posters, leaflets and advertisements. In some areas, DVDs are sent to schools for use in lessons on wildfire safety.

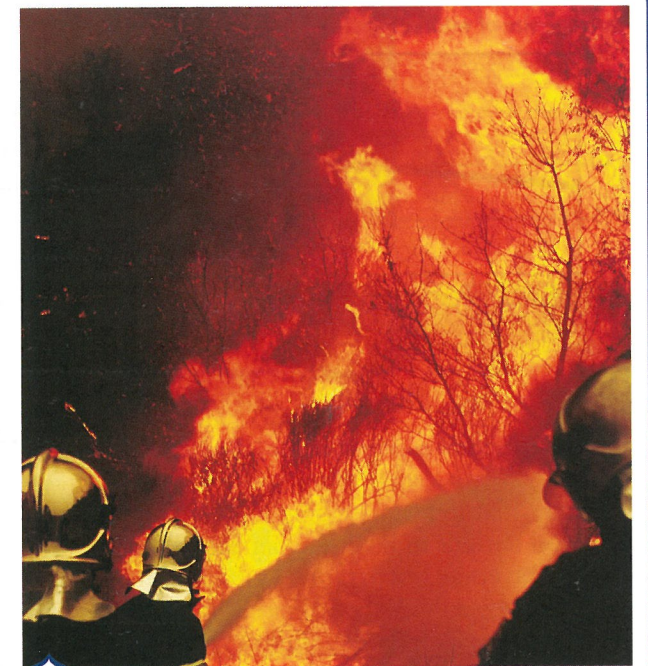
When a wildfire does occur, the public is given information on what to do. Methods of making homes as fireproof as possible are suggested, along with tips for survival during a wildfire. Families are also advised to draw up detailed evacuation plans. **Geographical Information System (GIS)** wildfire risk maps are available online and detailed wildfire forecast scenario software is being developed to inform people of the safest evacuation routes if a wildfire should start in any given area.

Some responses to a wildfire in Greece are described in the following case study.

### The deadliest blaze in Greek history, August 2007

A total of 42 wildfires raged for three days across southern and central Greece. They killed at least 57 people, and destroyed 110 villages and 2.5 million hectares of farmland, along with many more hectares of pine forest and olive groves. Arsonists started some of the fires and seven people were arrested. Once started, the fires spread quickly as strong winds fanned the flames across tinder-dry forests, which had not seen rain for several months.

Hundreds of people were evacuated by land and sea. Over 1,000 soldiers were called in to assist firefighters (Photo **C**) and create fire lines. Police blocked roads to prevent people from entering danger areas and firefighting planes dropped water onto the wildfires. Firefighters and aircraft came from 17 countries. The Greek government declared a state of emergency and offered compensation to people who lost relatives or property.



**C** Greek firefighters

#### Activities

- Describe ways in which each of the following groups may respond to or help reduce the damage from wildfires: emergency services, armed forces, local authorities, local residents.
- Suggest how education helps to reduce the risk of wildfires.
- Give two causes of the Greek wildfires of 2007.
  - Give three effects of the Greek wildfires of 2007.
  - Give three ways in which people responded to the Greek wildfires of 2007.

**extension** Suggest how GIS wildfire risk maps can be used to reduce the damage from wildfires.

#### links

Learn more about dealing with wildfires at [www.smokeybear.com](http://www.smokeybear.com) and [www.iccsafe.org](http://www.iccsafe.org) → public safety → wildfire safety