

**Tuesday 24 January 2012 – Afternoon**

**GCSE GEOGRAPHY B**

**B561/01/02/RB** Sustainable Decision Making (SDM) (Foundation and Higher Tier)

**RESOURCE BOOKLET**

**This Resource Booklet should be available to candidates for up to three working weeks prior to this date.**

**Duration: 1 hour**



**INSTRUCTIONS TO CANDIDATES**

- This Resource Booklet must be handed in to your teacher at the end of each lesson. **You must not write on the booklet.**

**INFORMATION FOR CANDIDATES**

- The following abbreviations may be used:
  - MEDC – More Economically Developed Country.
  - LEDC – Less Economically Developed Country.
  - EU – European Union which includes the United Kingdom.
- This document consists of **18** pages. Any blank pages are indicated.

**INSTRUCTION TO EXAMS OFFICER / INVIGILATOR**

- Do not send this Resource Booklet for marking; it should be retained in the centre or recycled. Please contact OCR copyright if you wish to re-use it.

**THE ISSUE: A DAMMING REPORT – why are some strategies for flood management more sustainable than others?**

**CONTENTS OF THE RESOURCE BOOKLET**

- Resource 1 – Two drainage basins
- Resource 2 – Impacts of flooding
- Resource 3 – Areas which could be affected by flooding
- Resource 4 – Floodplain hazard zones
- Resource 5 – Human use of floodplains
- Resource 6 – Flood management strategies
- Resource 7 – Flooding in Brisbane, Australia, January 2011

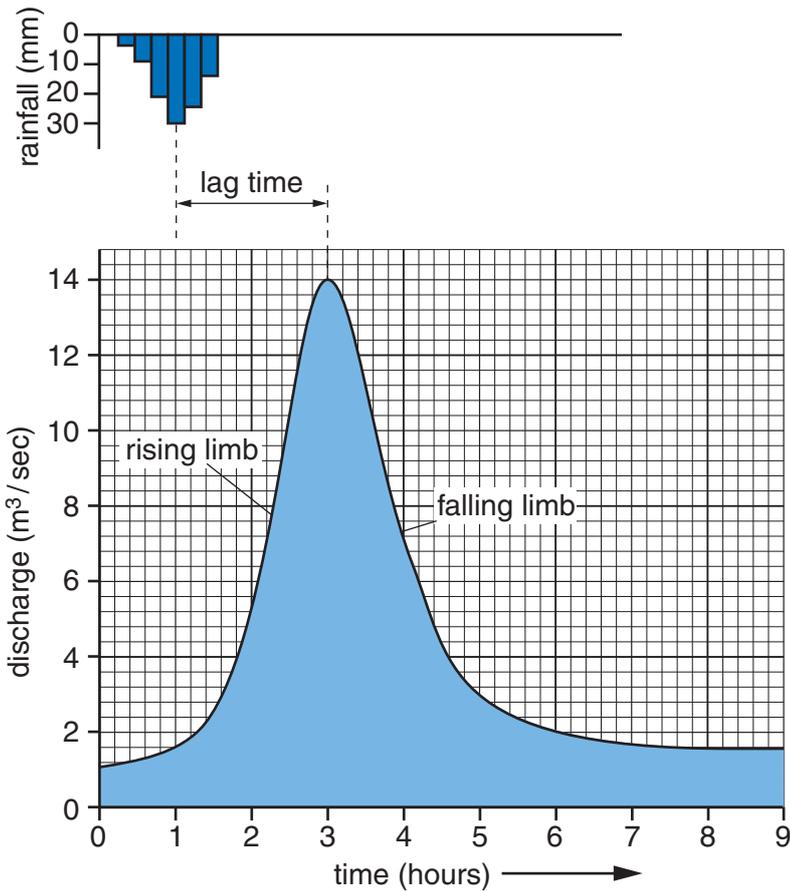
This paper has been pre modified for carrier language

**RESOURCE 1**

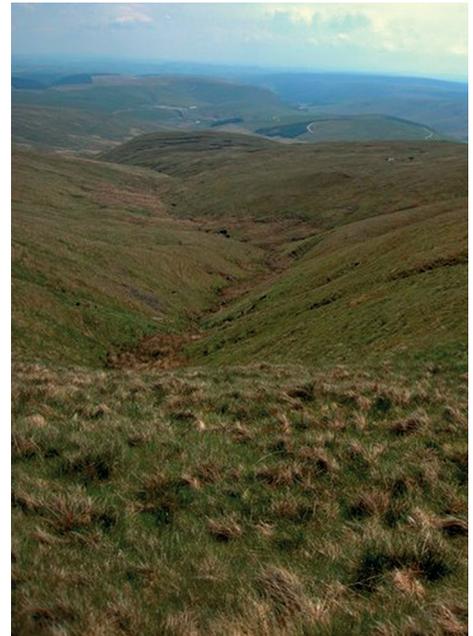
**Two drainage basins**

**Drainage Basin A**

**Storm hydrograph**



**Photograph taken in Drainage Basin A**



**1:50 000 OS map extract, showing where the photograph was taken in Drainage Basin A**

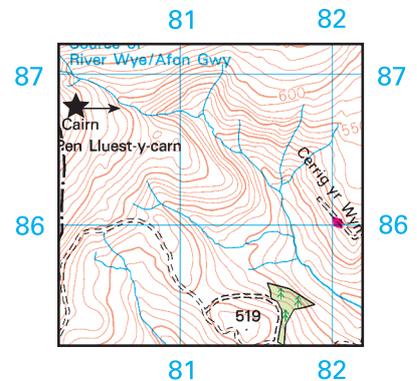
**HEIGHTS**

Contours are at 10 metres vertical interval

Heights are to the nearest metre above mean sea level

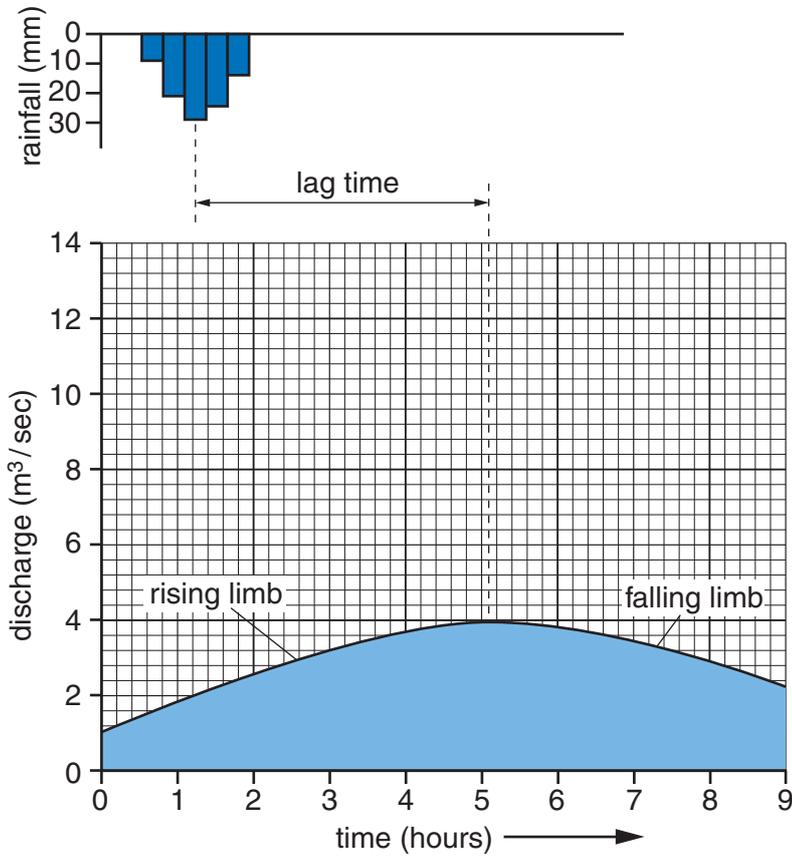
Where two heights are shown the first height is to the base of the triangulation pillar and the second (in brackets) to the highest natural point of the hill

★ Point at which photo was taken  
 → Direction photographer faced

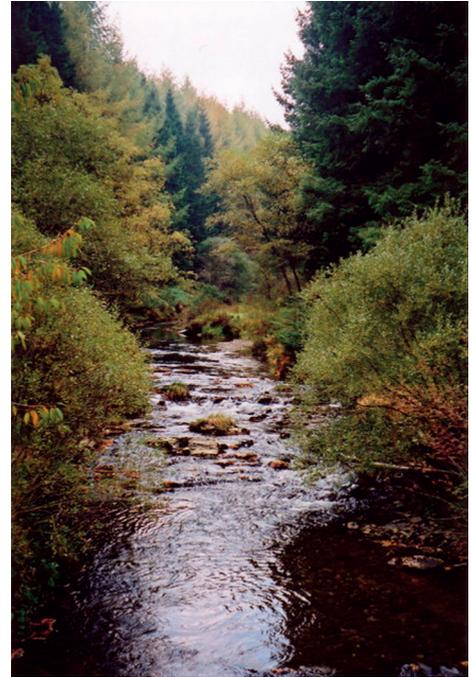


Drainage Basin B

Storm hydrograph



Photograph taken in Drainage Basin B

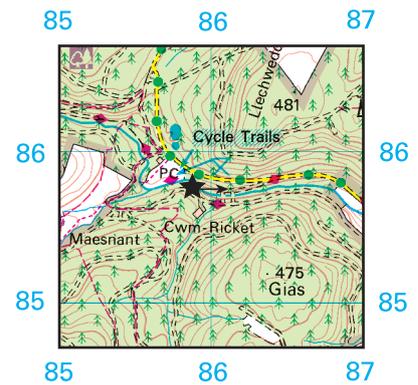


1:50 000 OS map extract, showing where the photograph was taken in Drainage Basin B

**LAND FEATURES**

- Coniferous wood
- Non-coniferous wood
- Mixed wood

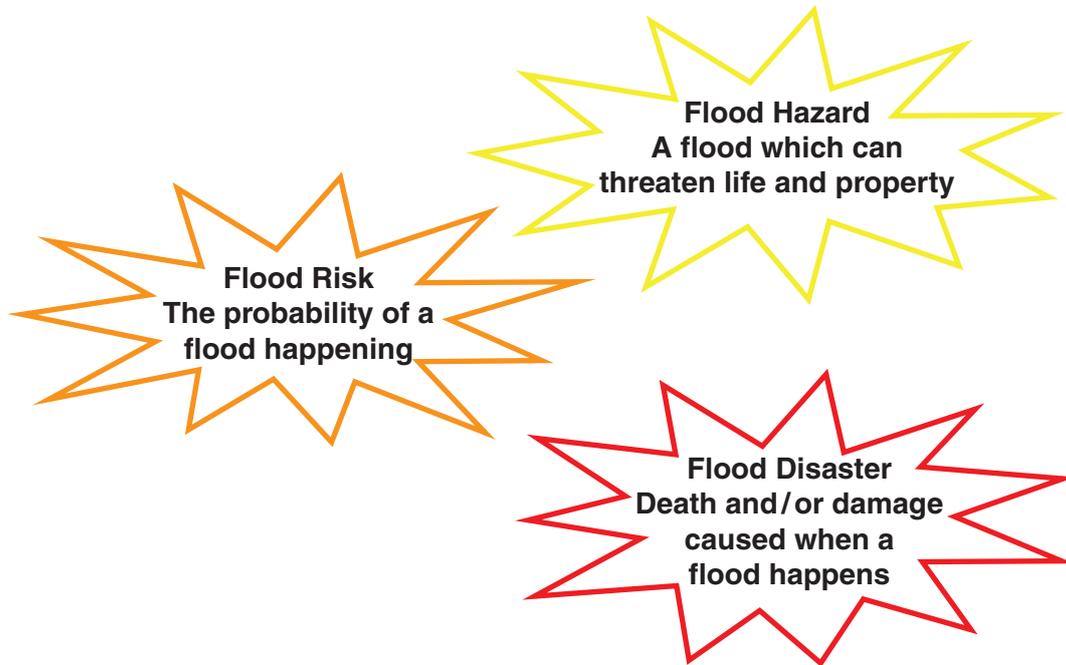
★ Point at which photo was taken  
 → Direction photographer faced



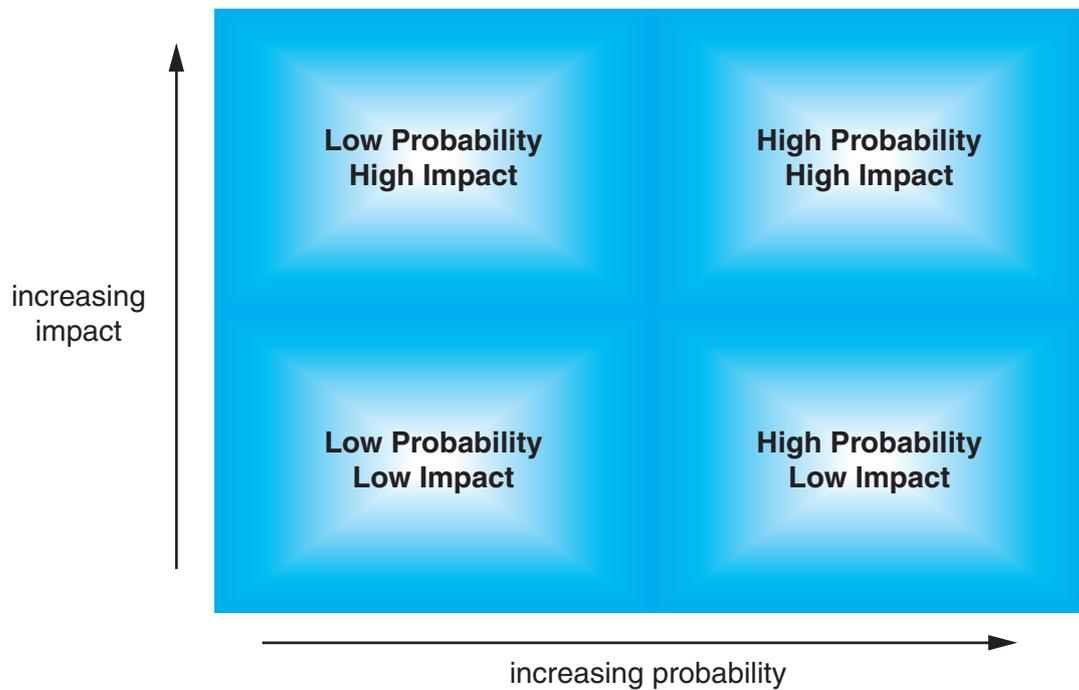
## RESOURCE 2

## Impacts of flooding

2(a)



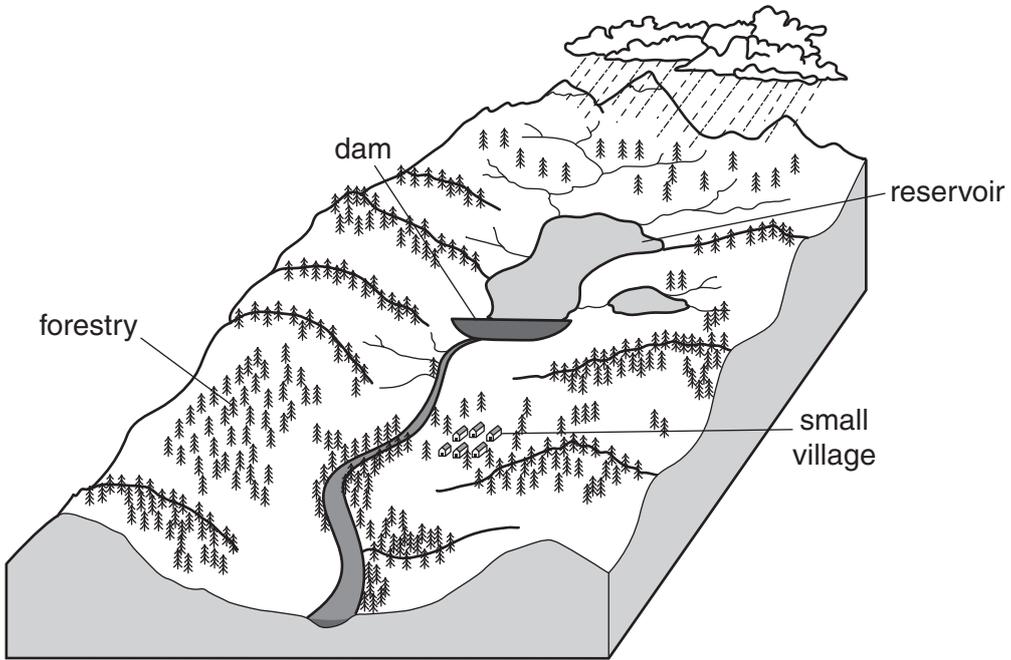
2(b)



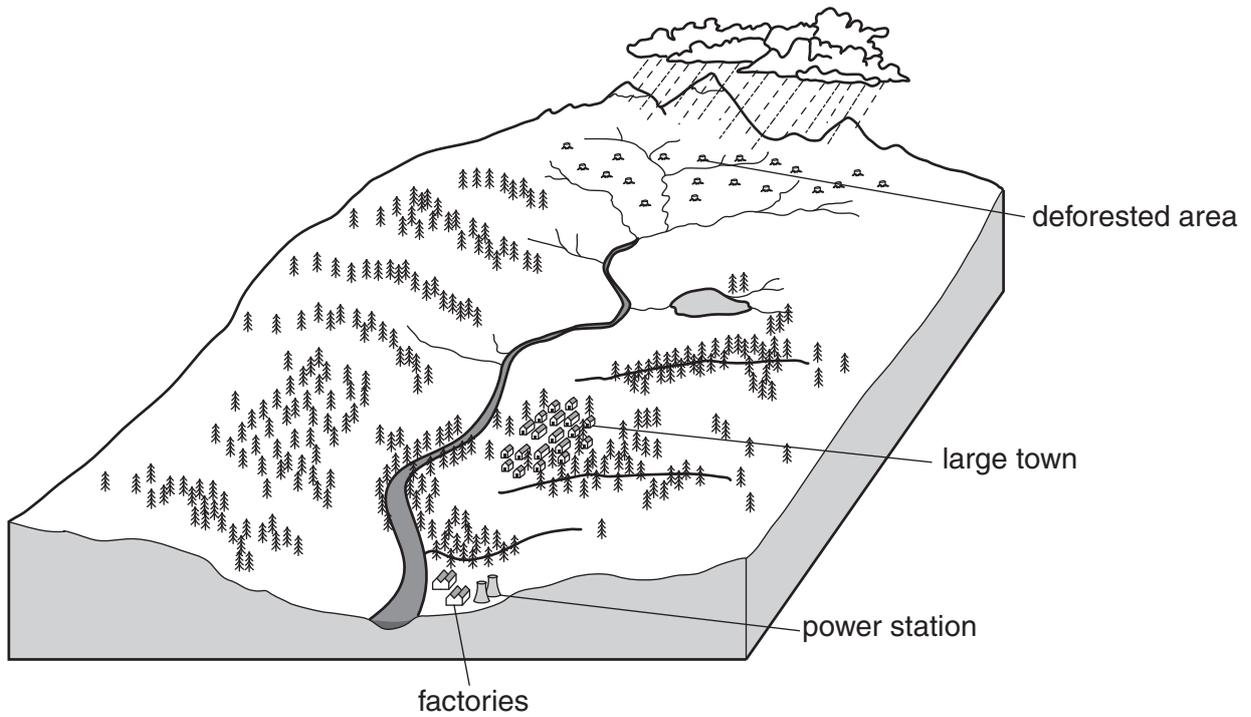
**RESOURCE 3**

**Areas which could be affected by flooding**

**Area 1**

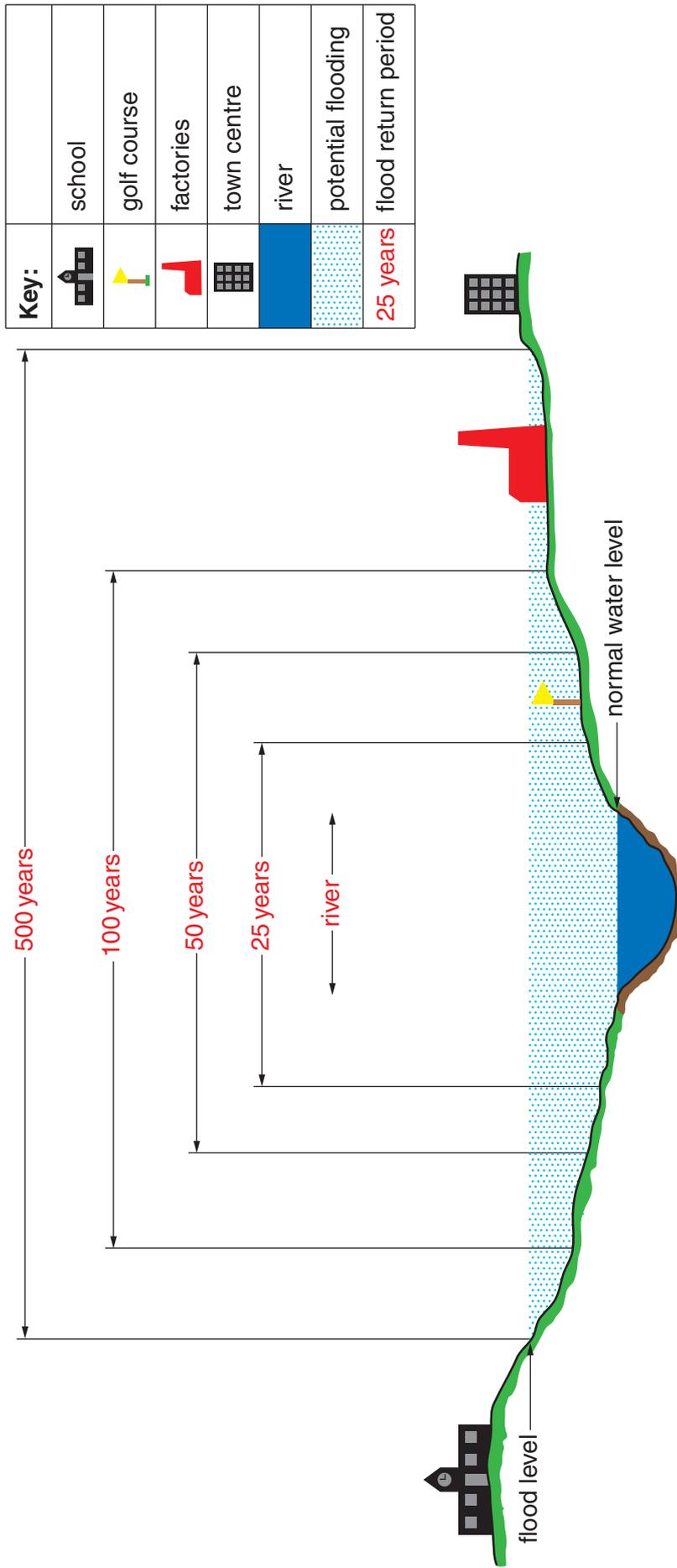


**Area 2**



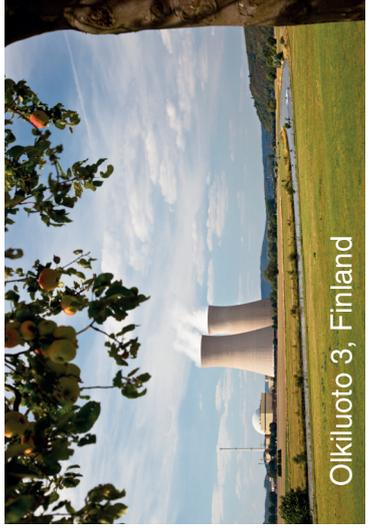
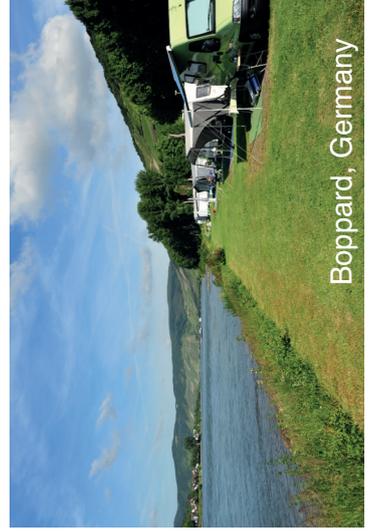
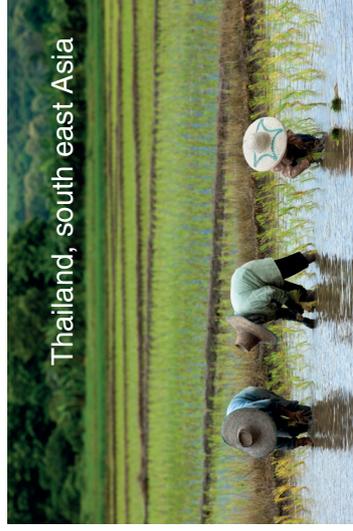
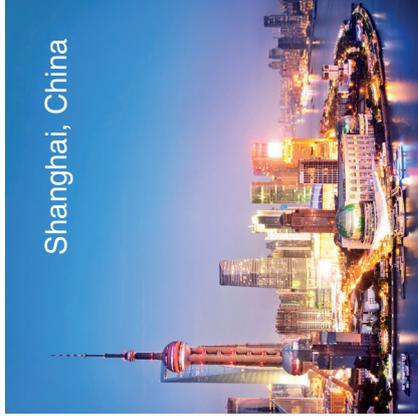
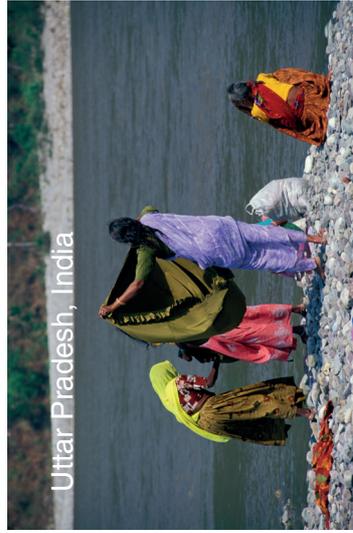
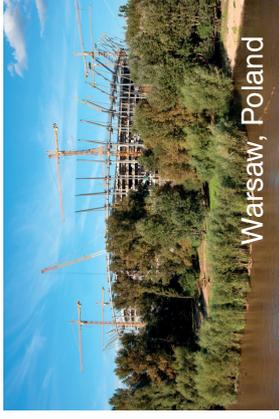
**RESOURCE 4**

**Floodplain hazard zones**



**RESOURCE 5**

**Human use of floodplains**



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## RESOURCE 6

### Flood management strategies

#### Monitoring

- Constant monitoring, effective warning systems and insurance allow floodplain development
- This will not reduce flood damage



#### Zoning

- Dividing up the floodplain into different areas or zones based on risk of flooding
- Activities/building within the zones is regulated
- Can be enforced by law



Flo  
Manag  
Strat

## Hard engineered flood defences – drainage basin level

- Building dams and reservoirs
- Can be multipurpose



## Hard engineered flood defences – local level

- Constructing flood defences
- Enlarging and straightening channels



Flood  
management  
strategies

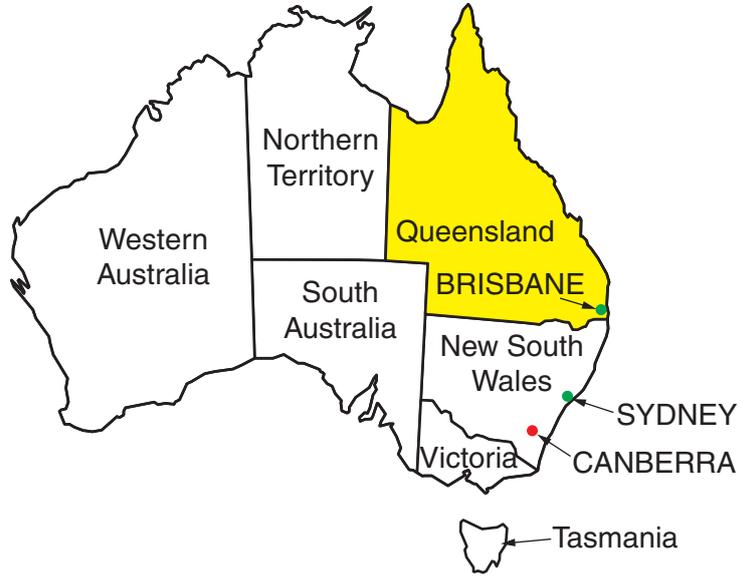
**FOLD OUT THIS PAGE  
FOR RESOURCE 6**



**RESOURCE 7**

*This resource continues on pages 14 and 15*

**Flooding in Brisbane, Australia, January 2011**



## RESOURCE 7 continued

**BRISBANE HIT BY HUGE FLOOD****January 2011**

Australia's third largest city is facing a massive clean-up as thousands of residents returned to assess the damage caused to their homes by the biggest flood to hit Brisbane in decades.

11 900 homes have been hit by serious flood damage, another 14 000 properties and 6 000 businesses are partially flooded.

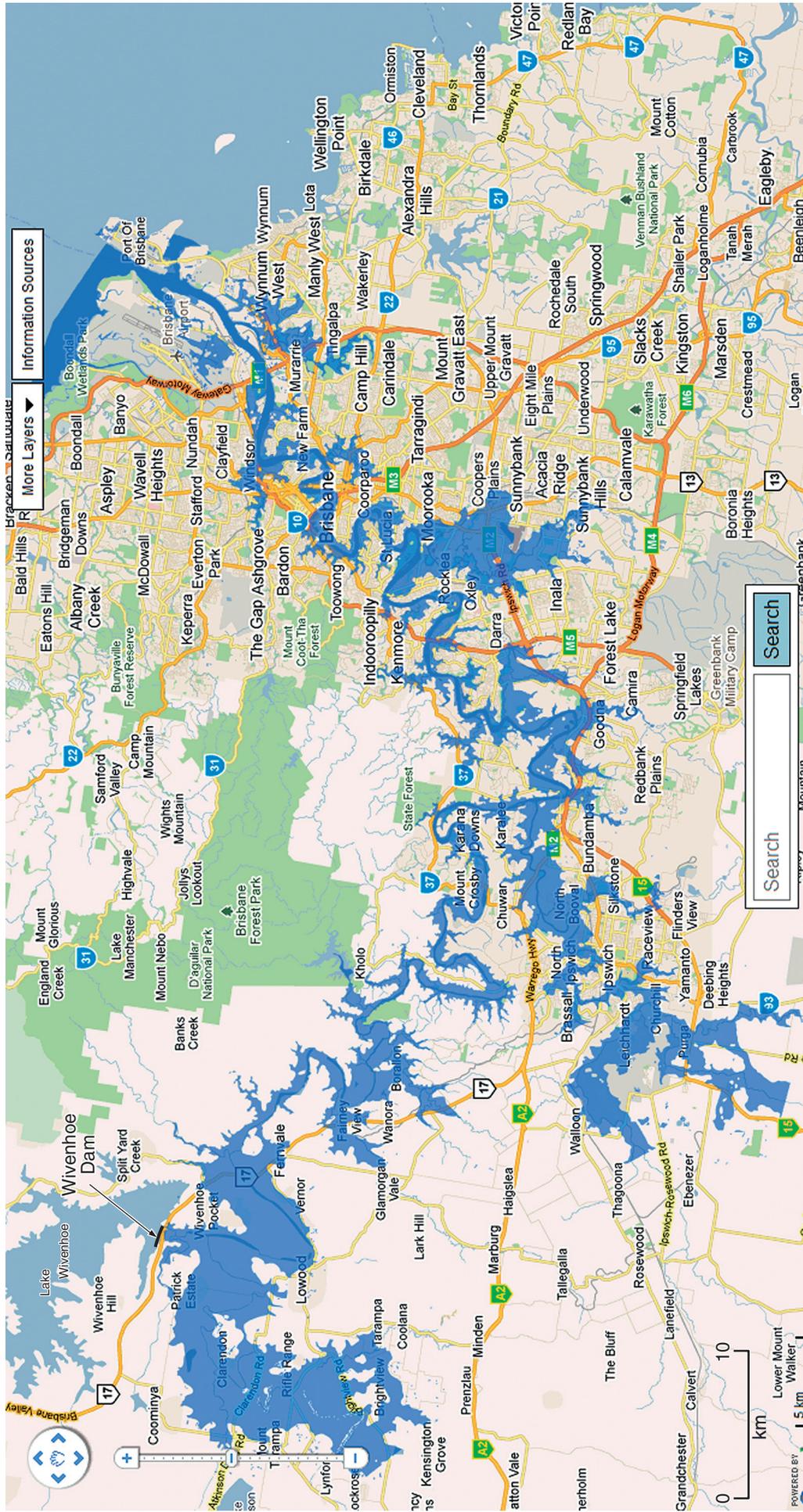
The death toll from the floods in Queensland has now risen to 35. It's thought the cost of rebuilding the city will reach A\$10 billion, equivalent to £6.15 billion.

The Queensland State Governor said the crisis presented Brisbane with an unprecedented challenge because of the number of people left living in the flood-ravaged suburbs.

**Flooding in Queensland, Australia – Key Facts**

- High rainfall in the area caused by Tropical Cyclone Tasha
- La Niña, which affects weather patterns in eastern Australia, was the strongest since 1973
- December 2010 was Queensland's wettest on record
- Several recent years of drought led to the Wivenhoe Dam Reservoir being allowed to fill during this time of high rainfall
- Continued high rainfall in January 2011 meant that water had to be released from the Wivenhoe Dam, increasing the level of the Brisbane River by up to 10 m.

### Brisbane River flood map 2011



areas flooded in January 2011

Map data © 2011 GBRMPA, Google, Whereis(R), Sensis Pty Ltd.





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