

B O A R D O F S T U D I E S
NEW SOUTH WALES

2006

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Geography

General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen
- Board-approved calculators may be used
- A Stimulus Booklet is provided with this paper
- Write your Centre Number and Student Number at the top of pages 9, 11 and 13

Total marks – 100

Section I Pages 2–6

15 marks

- Attempt Questions 1–15
- Allow about 25 minutes for this section

Section II Pages 9–14

25 marks

- Attempt Questions 16–18
- Allow about 45 minutes for this section

Section III Page 15

60 marks

- Attempt Questions 19–21
- Allow about 1 hour and 50 minutes for this section

Section I

15 marks

Attempt Questions 1–15

Allow about 25 minutes for this section

Refer to the Stimulus Booklet

Use the multiple-choice answer sheet.

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word *correct* and drawing an arrow as follows.

A B C D
correct
↙

- 1 Which of the following best describes the geographical term *environment*?
- (A) Where things are and why they are there
 - (B) The relationship between people and ecosystems
 - (C) A system formed by the interaction of living organisms
 - (D) The total surroundings, including biophysical, spatial and cultural elements

Refer to Sources A, C and D to answer Question 2.

- 2 What was the change in direction of Hurricane Katrina from 27 August 2005 to 29 August 2005?
- (A) East to north
 - (B) East to south
 - (C) West to north
 - (D) West to south

Refer to Sources A and D to answer Question 3.

- 3 Which of the following best describes the weather at *X* on Source A?
- (A) Northerly winds and cool temperatures
 - (B) Northerly winds and warm temperatures
 - (C) Southerly winds and cool temperatures
 - (D) Southerly winds and warm temperatures

Refer to Sources B, C and D to answer Question 4.

- 4 Which of the following best explains the maximum price of unleaded petroleum in the USA from July to November 2005?
- (A) Fears in the USA of rising consumer demand in winter
 - (B) Fears in Mexico that Hurricane Katrina would affect the oil supply
 - (C) Fears of a sudden reduction in oil supplies from major oil-exporting countries
 - (D) Fears in the USA that Hurricane Katrina had destroyed many off-shore oil platforms

Refer to Source D to answer Question 5.

- 5** What is the difference in air pressure between point *Y* and 35°N 80°W?
- (A) 10 hPa
 - (B) 12 hPa
 - (C) 16 hPa
 - (D) 18 hPa

Refer to Source E to answer Questions 6 and 7.

- 6** Which Area Reference has an easterly aspect?
- (A) 3067
 - (B) 3163
 - (C) 3366
 - (D) 3763
- 7** Which of the following can be seen from Smalley Hill (AR 3267)?
- (A) Power transmission line (AR 3259)
 - (B) Purrorumba Hill (AR 3170)
 - (C) Spot height 826 m (AR 3163)
 - (D) 'The Grove' (AR 3074)

Refer to Sources E and F to answer Questions 8 and 9.

- 8** What land use change has occurred in the south-east quadrant since 1974?
- (A) Quarry replaced by housing estate
 - (B) Rubbish tip replaced by landing ground
 - (C) Landing ground replaced by training track
 - (D) Sewage treatment works replaced by quarry

- 9** What is the approximate percentage decrease in the shown surface area of perennial Lake George from 1974 to 2001?
- (A) 25%
 - (B) 33%
 - (C) 50%
 - (D) 66%
- 10** What is the name given to a map that best shows property boundaries?
- (A) Cadastral
 - (B) Choropleth
 - (C) Isopleth
 - (D) Precis

Refer to Source G to answer Questions 11 and 12.

- 11** During which period did the eastern states of Australia experience the most extensive area of well above average rainfall?
- (A) 1981–1982
 - (B) 2000–2001
 - (C) 2001–2002
 - (D) 2002–2003
- 12** Which state experienced extremely low rainfall over the greatest proportion of its area in 1982–1983?
- (A) Queensland
 - (B) South Australia
 - (C) Tasmania
 - (D) Victoria

Refer to Source H to answer Question 13.

- 13** In which two consecutive years was there the greatest change in the Southern Oscillation Index (SOI)?
- (A) 1974 and 1975
 - (B) 1983 and 1984
 - (C) 1988 and 1989
 - (D) 1999 and 2000

Refer to Source I to answer Questions 14 and 15.

- 14** How many mega cities were there in the developing world in 1950?
- (A) 0
 - (B) 2
 - (C) 3
 - (D) 7
- 15** Which city is expected to have the greatest percentage increase in population between 2000 and 2015?
- (A) Bogotá
 - (B) Jakarta
 - (C) Mexico City
 - (D) Tokyo

BLANK PAGE

BLANK PAGE

Geography

--	--	--	--	--

Centre Number

Section II

--	--	--	--	--	--	--	--	--

Student Number

25 marks

Attempt Questions 16–18

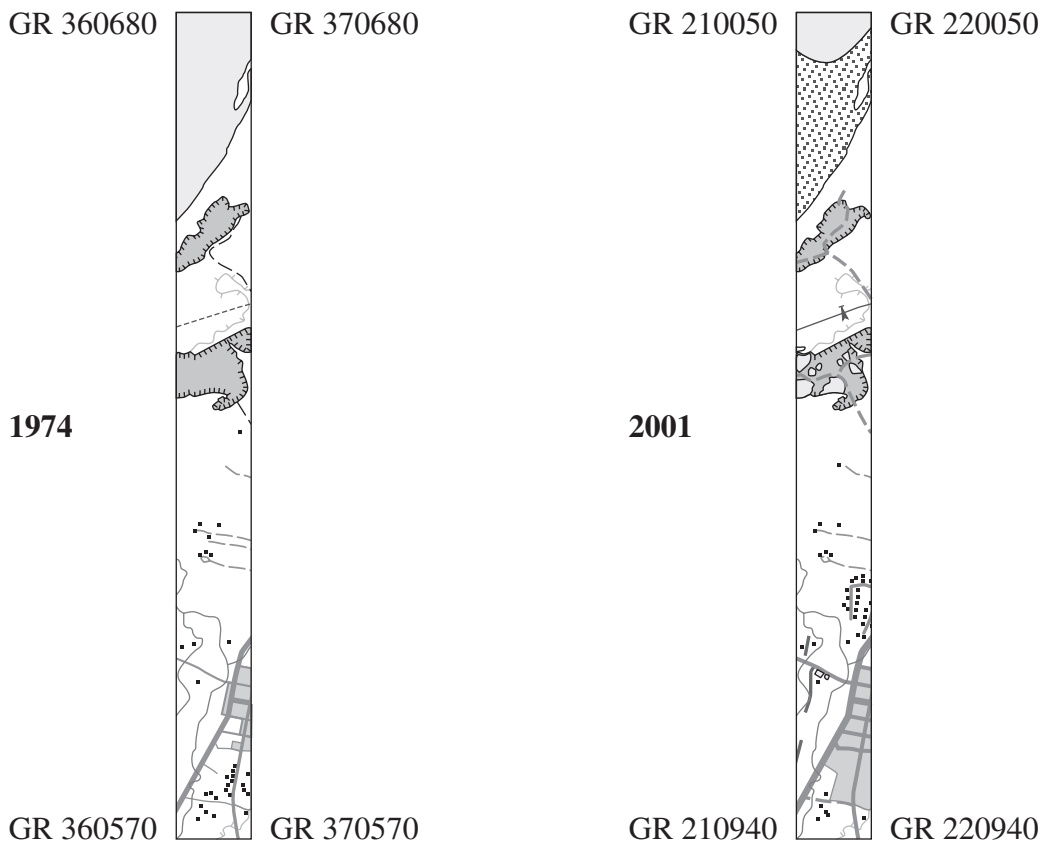
Allow about 45 minutes for this section

Use the Stimulus Booklet and your knowledge of geography to answer Questions 16–18 in the spaces provided.

Marks

Question 16 (8 marks)

Refer to Sources E and F on page 2 of the Stimulus Booklet and the transects below to answer part (a).



- (a) Identify TWO changes on the 2001 transect that have occurred since 1974. 2
- (i)
- (ii)

Question 16 continues on page 10

Question 16 (continued)

Refer to Sources G and H on page 3 of the Stimulus Booklet to answer part (b).

- (b) Evaluate the usefulness, validity and reliability of the Southern Oscillation Index as a tool for predicting drought in Australia. **6**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

End of Question 16

--	--	--	--	--

Centre Number

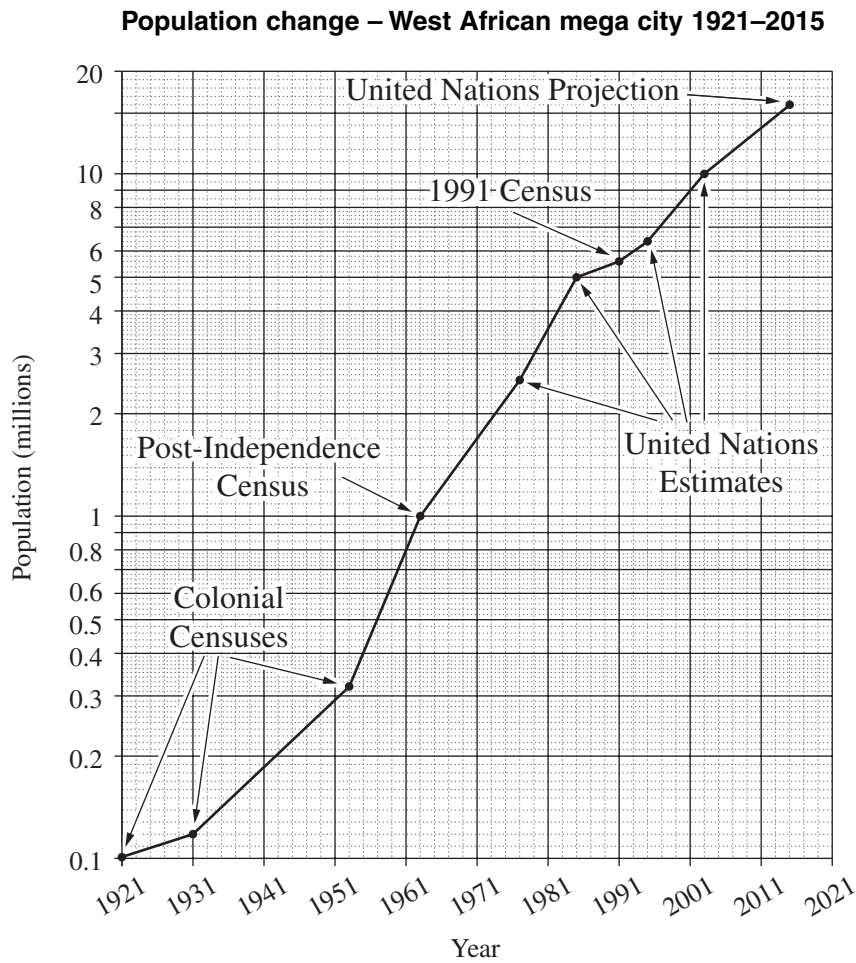
Section II (continued)

--	--	--	--	--	--	--	--	--	--

Student Number

Question 17 (8 marks)

Refer to the semilogarithmic graph below to answer parts (a)–(b).



(a) What is the United Nations projection for the population of the West African mega city in 2015? **1**

.....

(b) Identify the time period that indicates the greatest rate of increase of population change in the West African mega city. **1**

.....

Question 17 continues on page 12

Question 17 (continued)

Refer to Source I on page 4 of the Stimulus Booklet to answer part (c).

- (c) Give TWO reasons that explain why the number of mega cities has increased between 1950 and 2000. **2**

.....
.....
.....
.....

- (d) Identify and describe TWO challenges that mega cities currently experience. **4**

.....
.....
.....
.....
.....
.....
.....
.....
.....

End of Question 17

--	--	--	--	--

Centre Number

Section II (continued)

--	--	--	--	--	--	--	--	--

Student Number

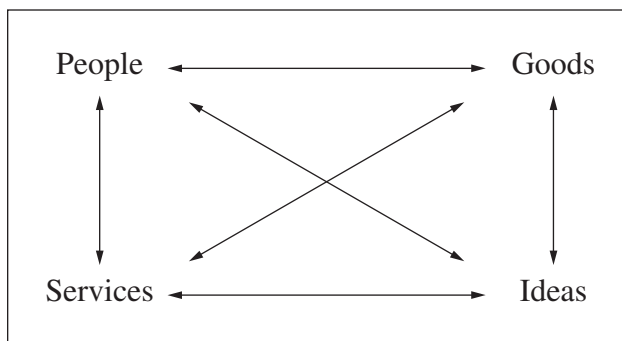
Marks

Question 18 (9 marks)

- (a) Identify an economic enterprise operating at a local scale. 1

.....

Refer to the diagram below to answer part (b).



Key
 ↔ Linkages and flows

- (b) Describe TWO different *internal* linkages of the economic enterprise named in part (a). 4

.....

.....

.....

.....

.....

.....

.....

.....

.....

Question 18 continues on page 14

Question 18 (continued)

- (c) Identify and outline TWO effects of global changes on the enterprise named in part (a). **4**

.....

.....

.....

.....

.....

.....

.....

.....

End of Question 18

Geography

Section III

60 marks

Attempt Questions 19–21

Allow about 1 hour and 50 minutes for this section

Answer each question in a SEPARATE writing booklet. Extra writing booklets are available.

In your answers you will be assessed on how well you:

- present a sustained, logical and well-structured answer to the question
 - communicate geographical information, ideas and issues
 - refer to appropriate case studies, illustrative examples and the Stimulus Booklet where appropriate
-

Question 19 (20 marks)

Evaluate traditional and contemporary ecosystem management strategies in terms of ecological sustainability.

Question 20 (20 marks)

Contrast the nature, character and spatial distribution of world cities with mega cities in the developing world.

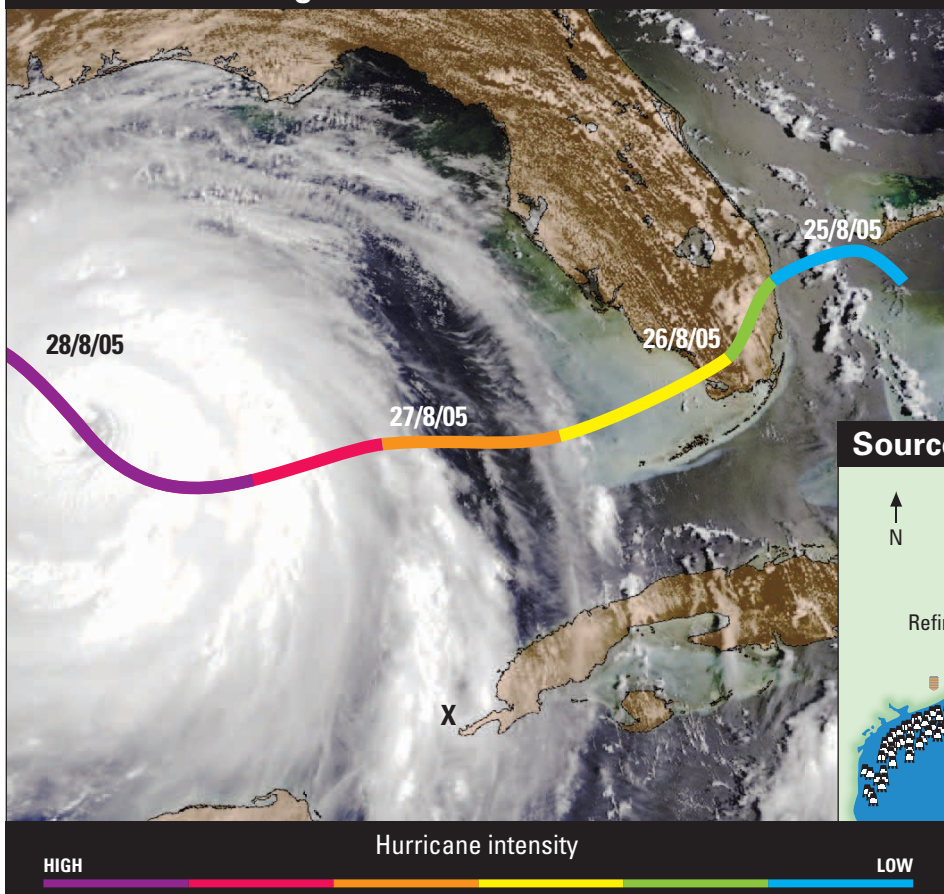
Question 21 (20 marks)

Examine the changing nature, spatial patterns and ecological dimensions of a global economic activity.

End of paper

BLANK PAGE

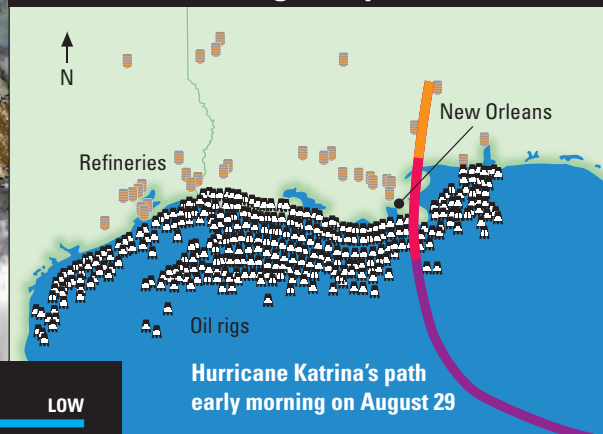
**Source A – Satellite image of Hurricane Katrina
28 August 2005**



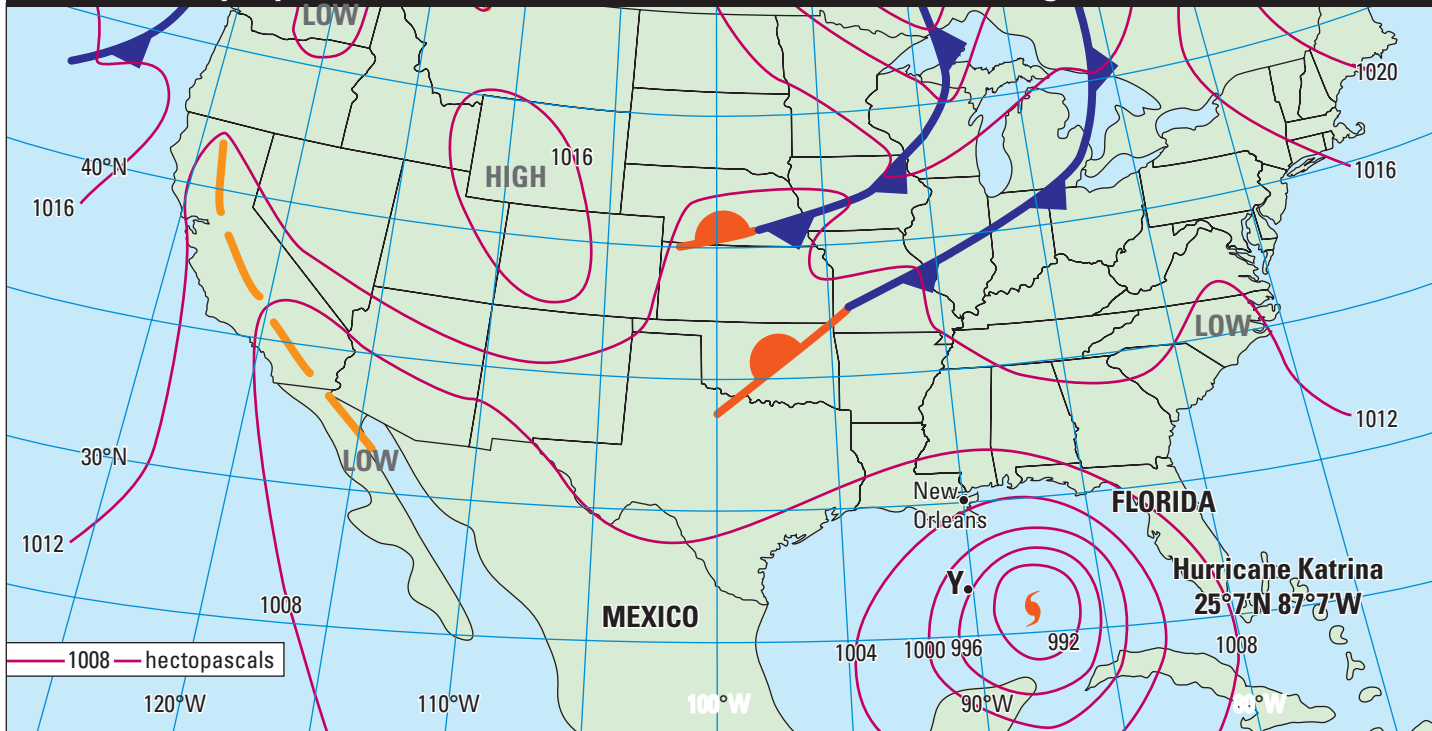
Source B – Unleaded petroleum prices in the USA July–November 2005



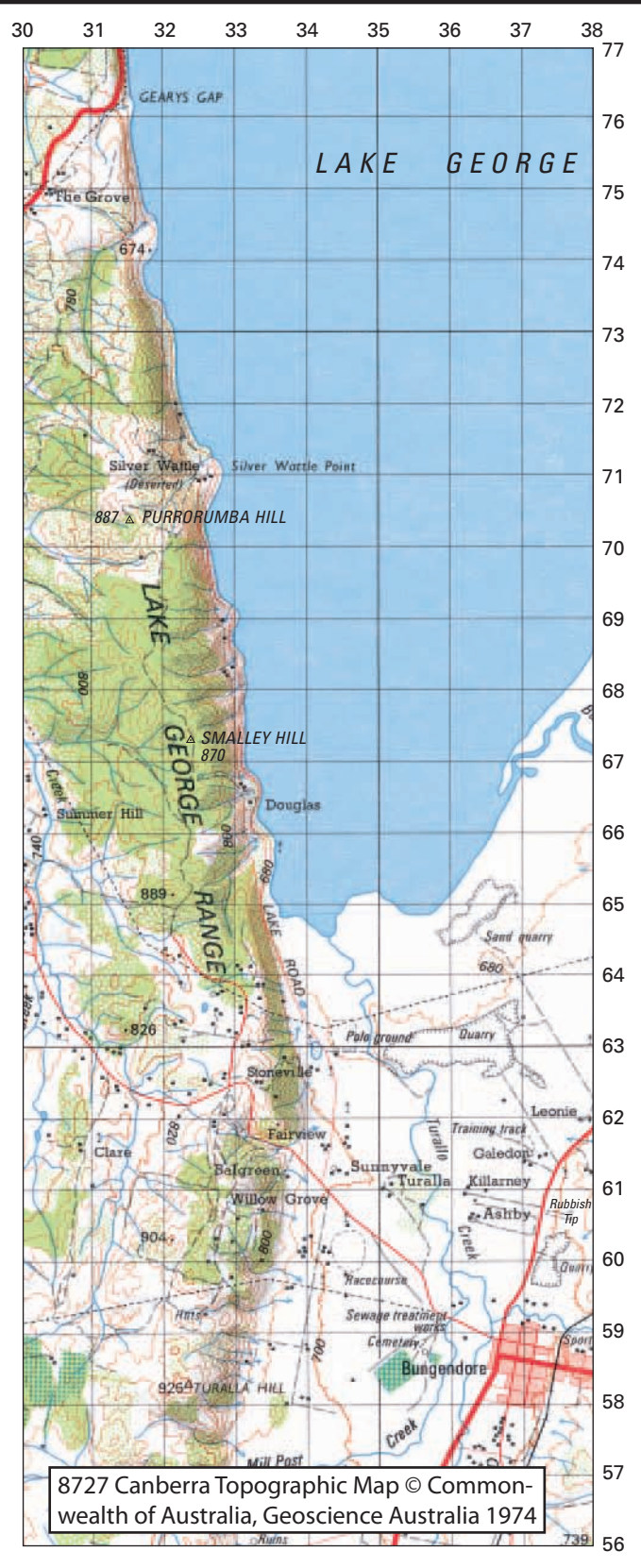
Source C – Oil rigs map



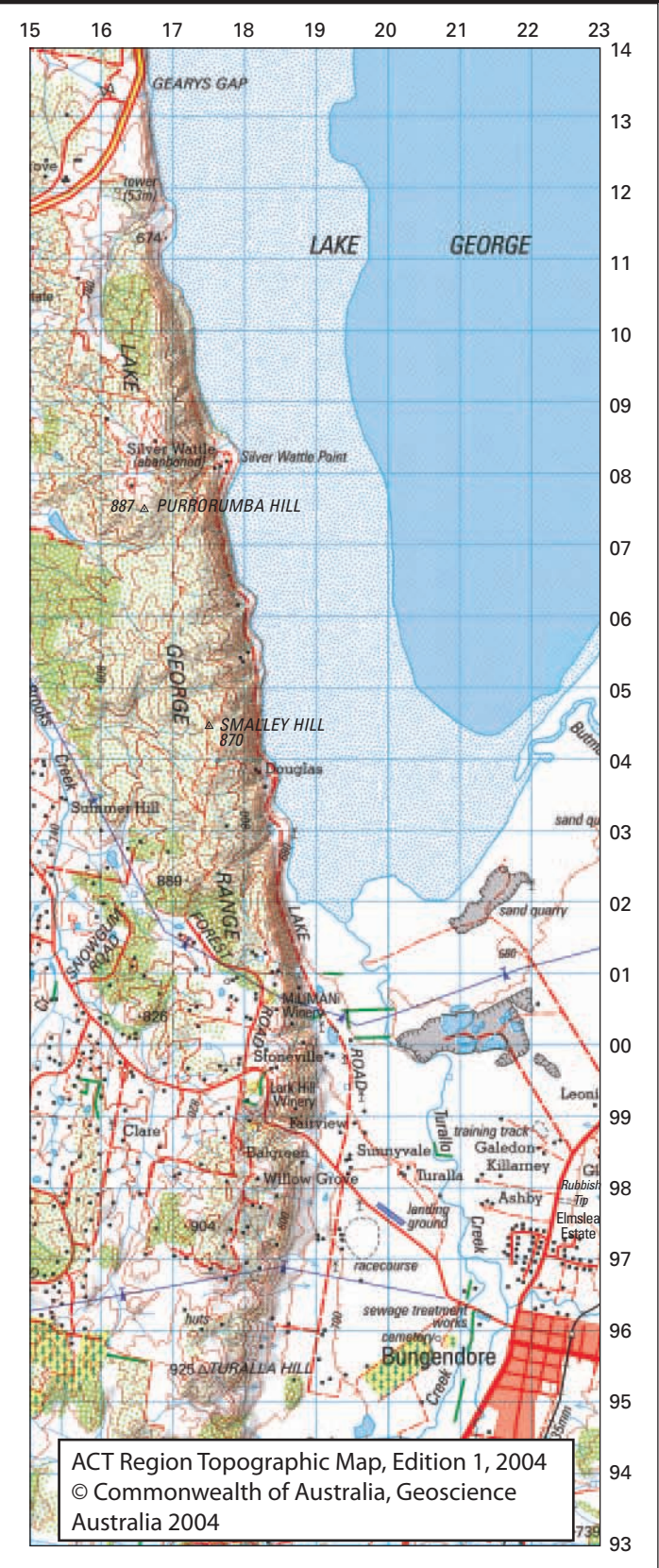
Source D – Synoptic Chart of Hurricane Katrina (7.00am EST 28 August 2005)



Source E – Lake George topographic map 1974



Source F – Lake George topographic map 2001

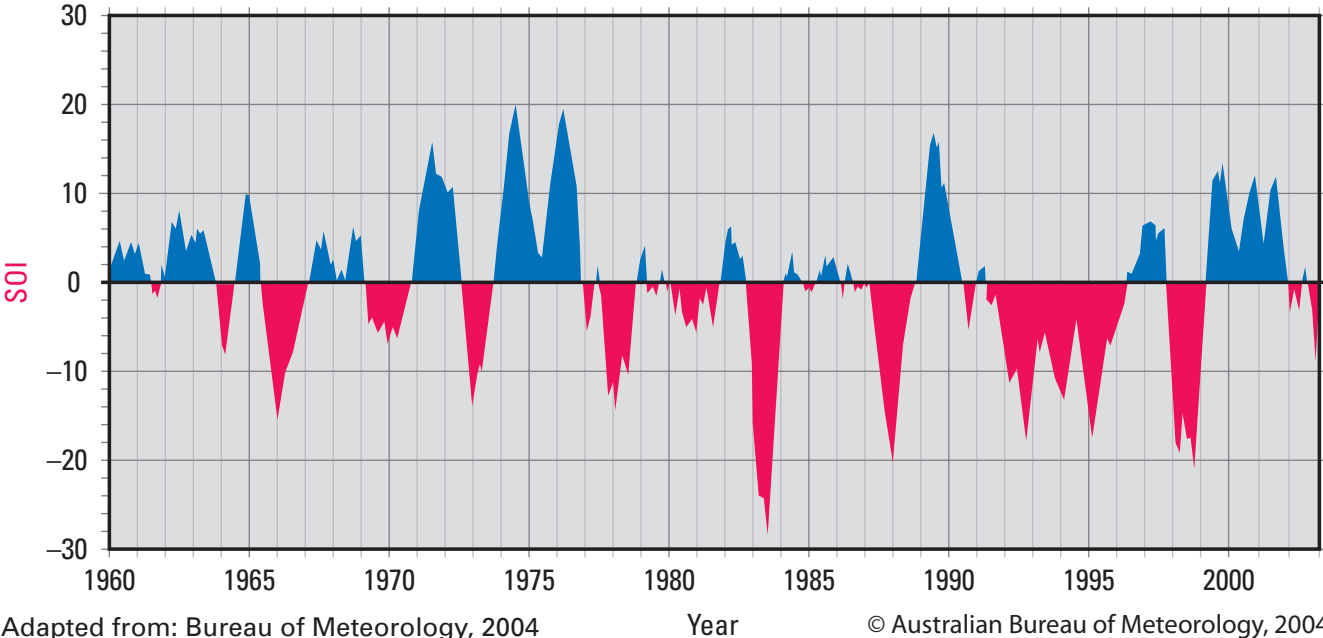


Key for Sources E and F	Source E	Source F
Built-up area; dual carriage way, vehicle track		
Principal road; minor road		
Single track railway line; windbreak; buildings		
Power transmission line; quarry		
Spot height; trig station; pine plantation		
Vegetation: scattered; medium; dense		
Lake: perennial; intermittent		

1 : 100 000
Contour interval: 20 m

Awaiting copyright

Source H – Southern Oscillation Index (SOI) (1960 to 2003) (The SOI compares the difference in air pressure between Tahiti and Darwin as a measure of air movement in the Pacific)



Adapted from: Bureau of Meteorology, 2004

© Australian Bureau of Meteorology, 2004

Source I – Selected cities with a population of 5 million or more

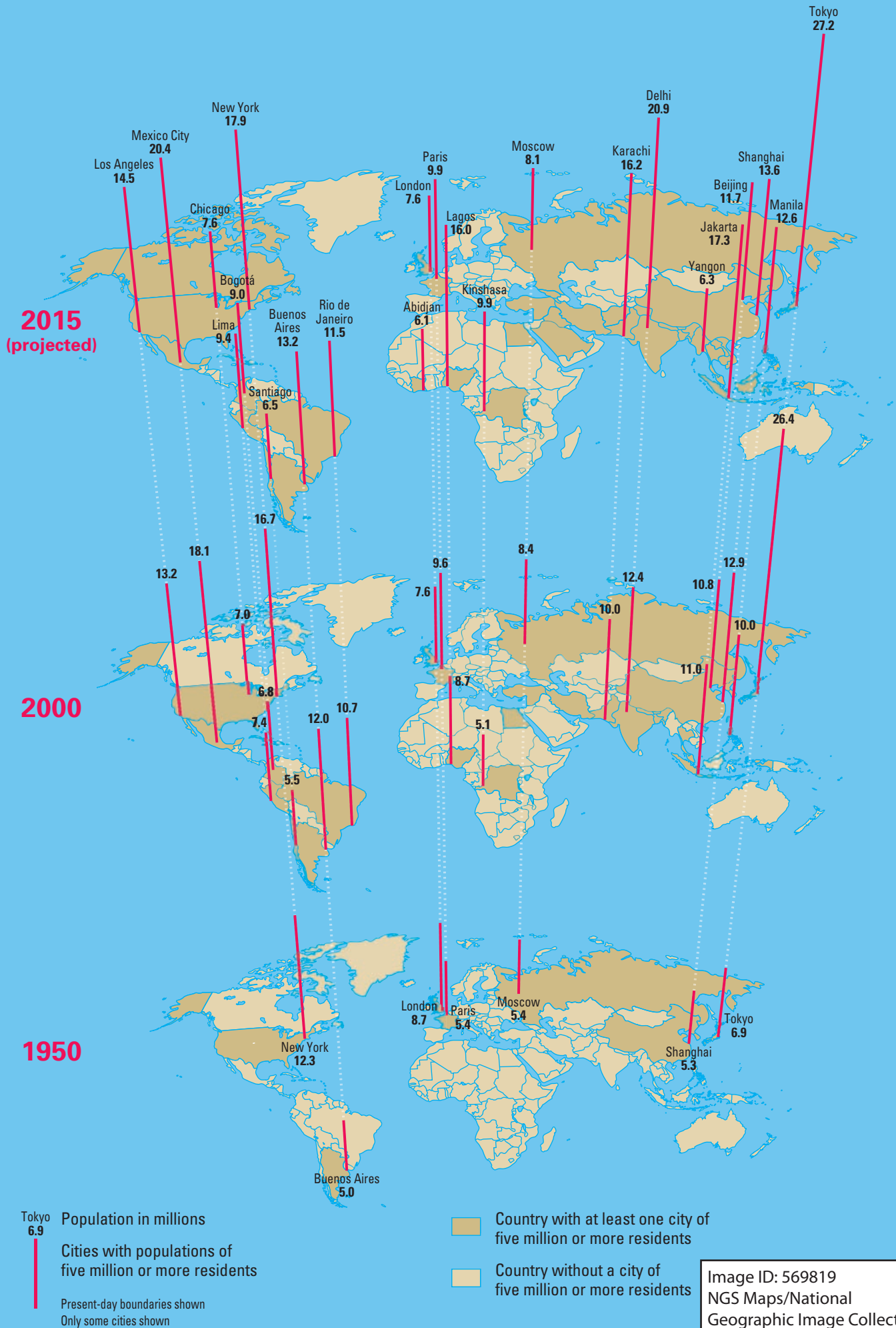


Image ID: 569819
NGS Maps/National Geographic Image Collection