



Rewarding Learning

ADVANCED
General Certificate of Education
January 2009

Geography

Assessment Unit A2 1

assessing

**Module 4: Physical Processes and
Human Interactions**

[A2G11]

MONDAY 12 JANUARY, MORNING

RESOURCE BOOKLET

RESOURCE 1

PHOTOGRAPH OF A STRETCH OF THE RIVER SHIMNA,
NEWCASTLE, CO. DOWN, AFTER CHANNELISATION



Source: Principal Examiner

RESOURCE 2A

COASTAL PROTECTION MEASURES, EAST STRAND, PORTRUSH, COUNTY



Source: Principal Examiner

RESOURCE 2B

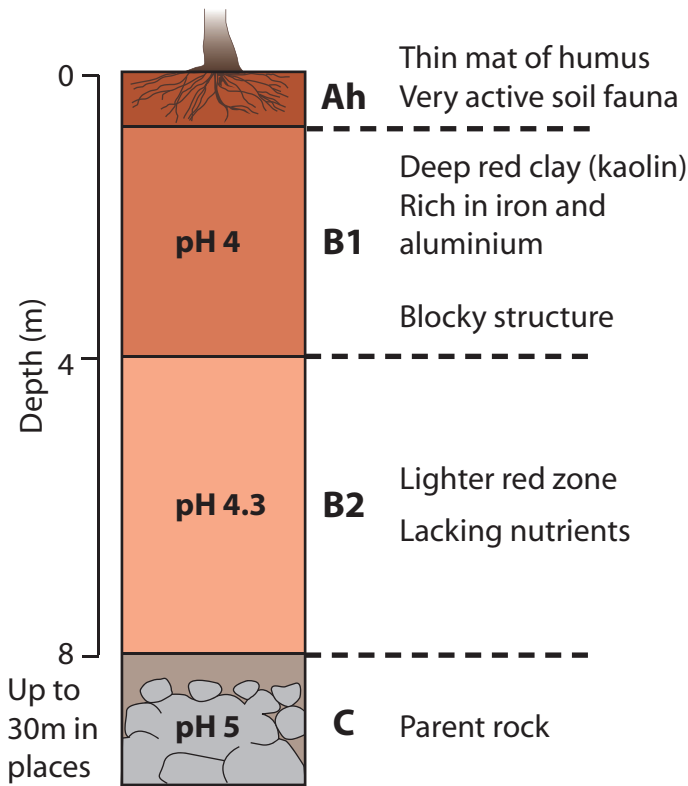


Source: Principal Examiner

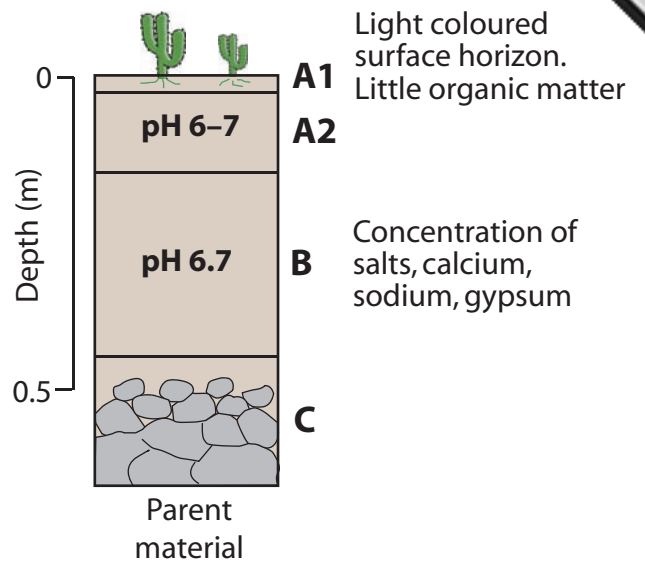
RESOURCE 3

TROPICAL ZONAL SOIL PROFILES

Oxisol Profile



Aridisol Profile



Source: Principal Examiner

RESOURCE 4

A NEWSPAPER REPORT ON PROPOSED DEFORESTATION IN UGANDA

Eco-tourists save forest 'jewels' from bulldozers

A wildlife reserve, earmarked for destruction to make way for biofuel crops, has been saved after a study showed that it would earn more from eco-tourism. More than 7 000 hectares of a Ugandan forest, containing rare and beautiful wildlife, were to be torn down and replanted with sugar cane for the production of ethanol.

The proposal was backed initially by the Ugandan Government but the decision to clear a third of the supposedly protected Mabira Forest Reserve, near Lake Victoria, has now been reversed. "This is a tragedy averted," said Paul Buckley, of the Royal Society for the Protection of Birds (RSPB). "It was ludicrous even to think of sacrificing such a precious site to a crop that is already heavily subsidised in Uganda. Now Uganda has a brilliant opportunity to make the most of its 'wildlife jewels'. The site is famous with eco-tourists and destroying it made no economic sense whatsoever."

A study by NatureUganda, a conservation group, showed that the financial benefits of protecting the forest, which covers 30 000 hectares, and encouraging eco-tourism, vastly outstripped the potential of biofuel crops. Other parts of Uganda were much more suitable for sugar cane crops. The commercial value of tourism and carbon capture in Mabira was estimated at more than £154 million a year whereas sugar cane production would yield around £3 million annually.

The executive director of NatureUganda, said: "The economy of Uganda depends on the country's environmental health. Agriculture, tourism and fisheries are core to our future wellbeing, making environmental protection an overriding factor in our development". Eco-tourism in Uganda is the country's second-biggest magnet for foreign currency and the Mabira Forest Reserve brings in 62% of the income from trips to forest reserves.

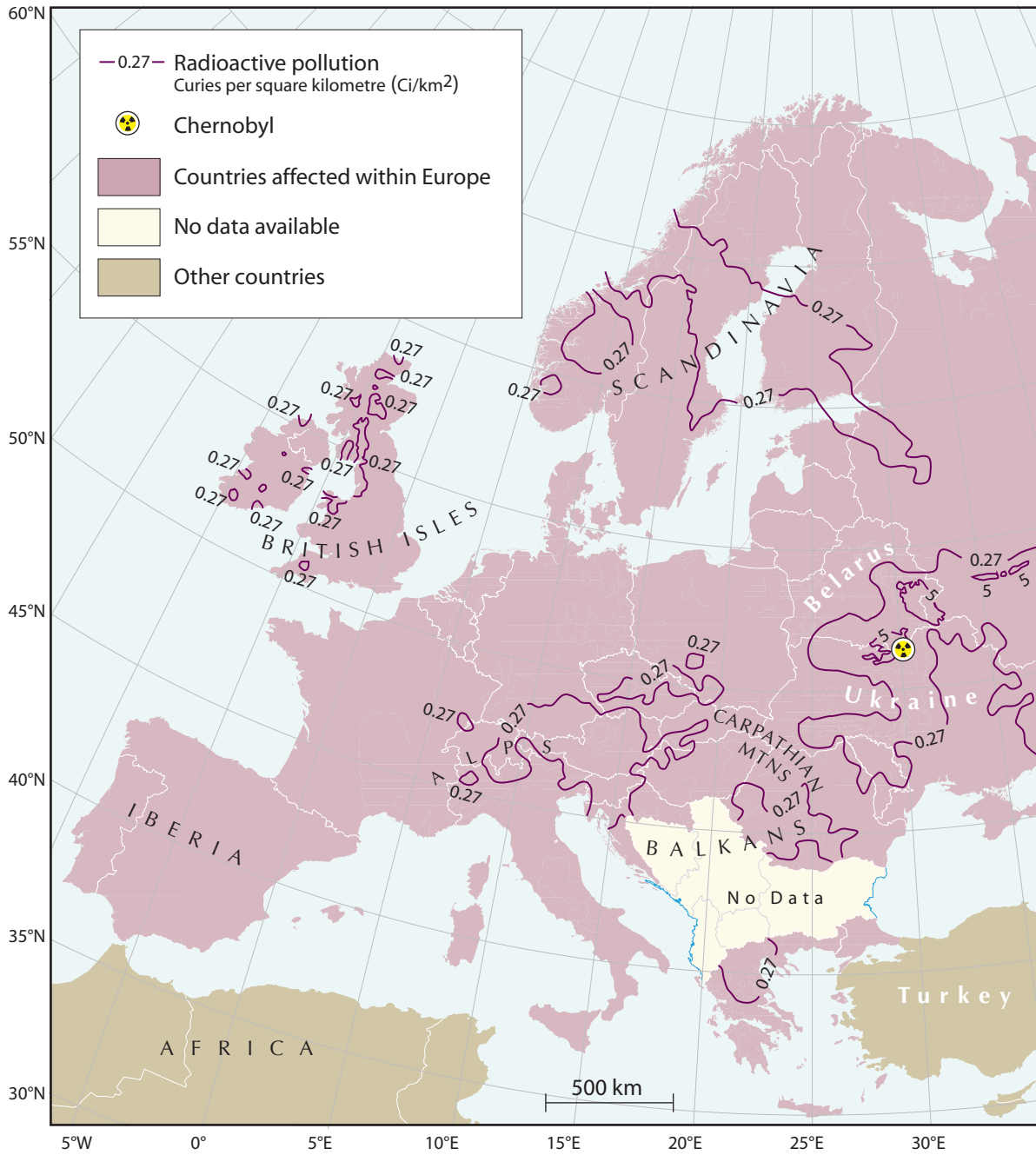
The report identified the forest as an unspoilt haven for 300 species of birds and 200 types of trees and it highlighted the area's importance for dozens of endangered species such as Grey-cheeked Mangabeys, a type of monkey. Among the birds in the area is the rare Nahan's Francolin, which has suffered serious decline because of deforestation, degradation of forest habitats and small-scale hunting.

Destruction of the forest would have breached an agreement between the Ugandan Government and the World Bank. In 2001, the World Bank agreed to help finance the construction of a hydro-electric dam on the River Nile in return for a pledge to protect this forest.

Adapted from the article Eco-tourists save forest "jewels" from bulldozers by Lewis Smith © The Times 10/2007

RESOURCE 5A

AREAS AFFECTED BY RADIATION FALLOUT AFTER CHERNOBYL INCIDENT



RESOURCE 5B**CHERNOBYL DISASTER LINKED TO HIGHER
RATE OF INFANT MORTALITY IN BRITAIN**

The debate over the health effects of the Chernobyl nuclear disaster in Britain re-opens today with research suggesting that infant mortality was higher in areas such as Liverpool, Bradford, Leicestershire, and Bristol where rain fell as the plume of fallout passed overhead.

A study, presented at a conference marking the 20th anniversary of the disaster, suggests that infant deaths may have risen by 11 per cent between 1986 and 1989 in those areas compared with 4 per cent in other areas.

The author of the report said, "This new study shows that the infant mortality trend, which was otherwise downwards, rose for a period of four years in England and Wales after Chernobyl. The results, based on such a large population, suggest that the effect of radioactive fallout could be ... greater than previously suspected".

Source: adapted from an article in The Independent, 23 March 2006 by I. Herbert and D. Linton

RESOURCE 5C**IS RADIATION COMING BACK?**

The areas of Belarus most polluted after the Chernobyl catastrophe occupy a large territory in the south and south east of the Gomel region. Attempts have been made to restore the economy in these areas through agriculture and forestry.

However, according to recent data, the lands that formerly were treated as clean territories and where agriculture and forestry were restored, have suddenly shown radiation levels exceeding the norm. Now, 20 years after the Chernobyl disaster, scientists are raising the alarm. In certain districts close to the Chernobyl plant, the situation is catastrophic. There are several areas that were cultivated for the past 15 years and the wood was clean; now more than 70 per cent of these woodcutting areas show dangerously high levels of pollution. Agricultural lands have also been affected.

Mikola Bulko of the Forest Institute has said that the situation is unclear and appears to contradict all previous theories about radiation. Thorough research is required.

Source: adapted from an article in Belarus Today, 17-23 July, 1996

RESOURCE 6A

INFORMATION ABOUT AIR QUALITY MONITORING IN NORTHERN IRELAND

Data relating to air quality in Northern Ireland is collected by kerbside stations which record hourly concentrations of particulate matter, sulphur dioxide and nitrogen dioxide. The data is analysed to produce statistics including the daily mean, maximum and minimum values for all pollutants recorded.

Eleven District Councils have designated areas of particular concern as “Air Quality Management Areas”. Some have drawn up Action Plans which outline the specific measures to be taken in order to reduce air pollution to acceptable levels.

Belfast City Council has declared four Air Quality Management Areas as a result of high levels of nitrogen dioxide and particulates. Each lies along a major urban routeway. The Council, in conjunction with other bodies such as the Roads Service, the Planning Service and the Northern Ireland Housing Executive, has developed an Air Quality Action Plan in order to improve air quality. The Belfast Metropolitan Transport Plan sets out a range of proposals to be implemented by 2015, including the promotion of sustainable travel such as public transport, walking and cycling.

Source: adapted from a range of resources by the Principal Examiner

RESOURCE 6B

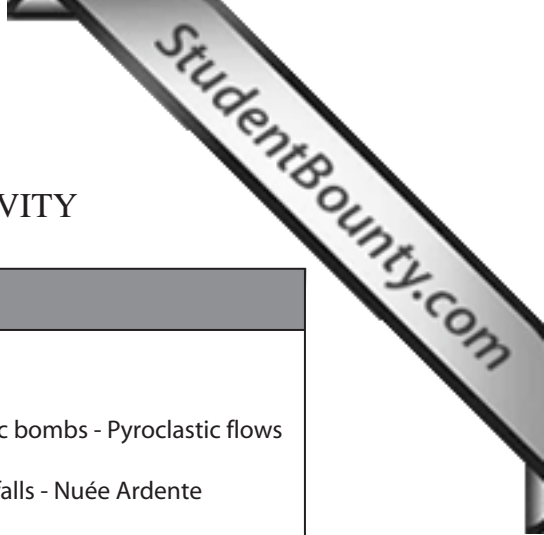
KERBSIDE AIR QUALITY MONITORING STATION, BELFAST



Source: Principal Examiner

RESOURCE 7

THE HAZARDS OF VOLCANIC ACTIVITY



ZONE	TYPICAL HAZARDS
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #800000; margin-right: 5px;"></div> 1 Crater </div>	Lava lake - Explosion
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #C8513E; margin-right: 5px;"></div> 2 Adjacent </div>	Explosion - Lava flows - Ash falls - Fire - Volcanic bombs - Pyroclastic flows
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #F4A460; margin-right: 5px;"></div> 3 Intermediate </div>	Lava flows - Volcanic mud flows (Lahars) - Ash falls - Nuée Ardente
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 15px; background-color: #F9E79F; margin-right: 5px;"></div> 4 Distant </div>	Fine ash fall - Earthquakes - Upper atmosphere impacts

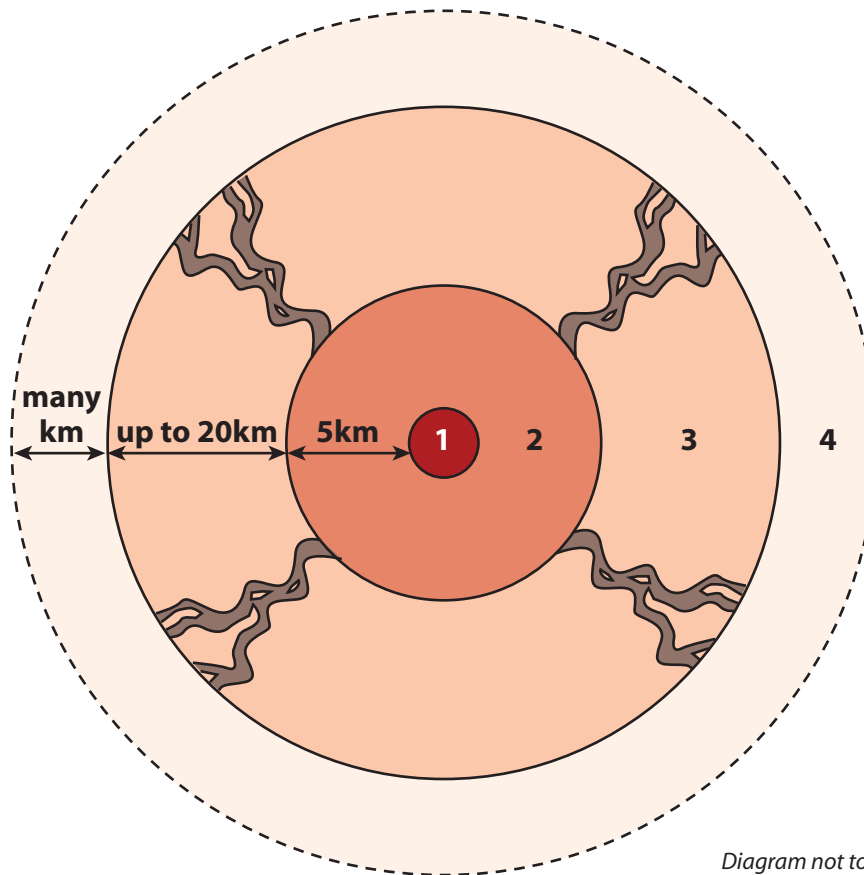
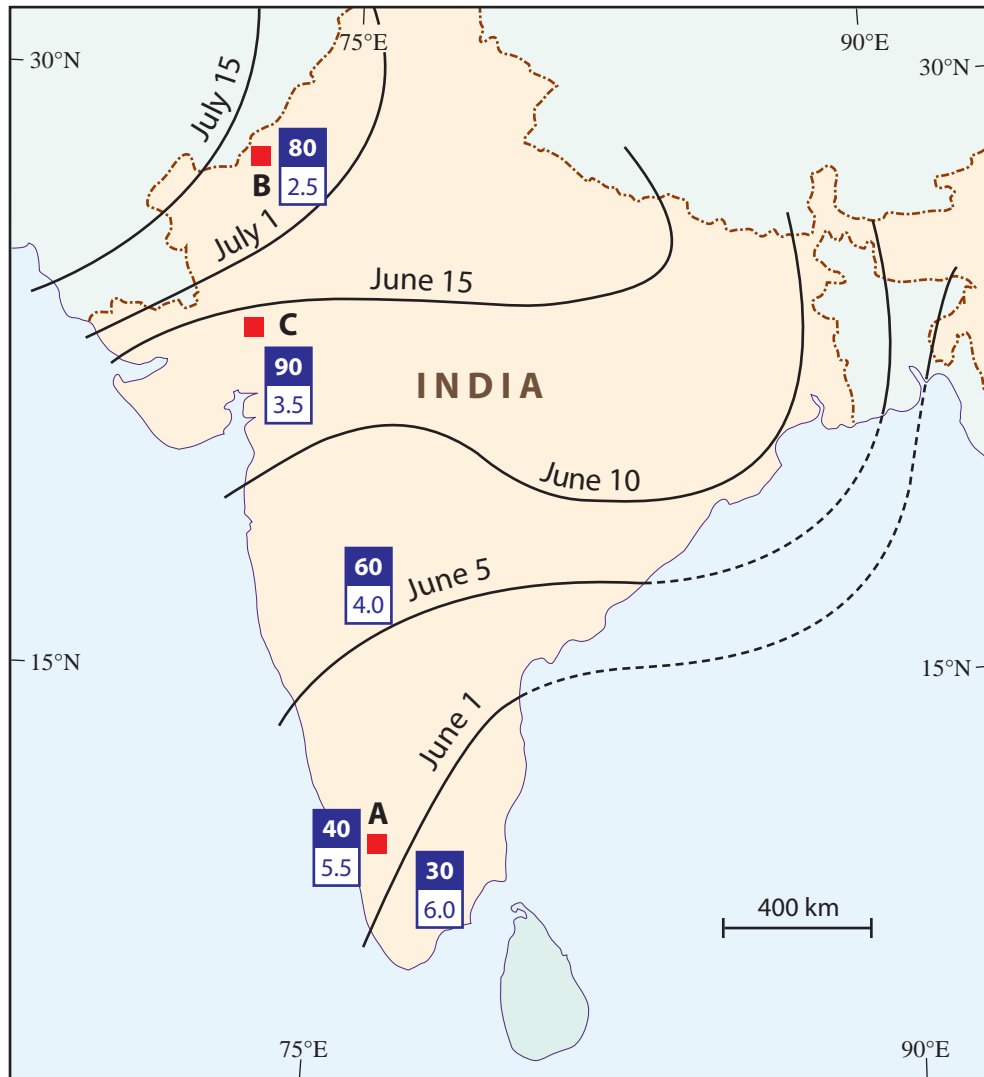


Diagram not to scale

Source: Principal Examiner

RESOURCE 8

THE WET SUMMER MONSOON IN INDIA



----- International boundary

June 1 Average onset date of wet summer monsoon

90 % annual rainfall from wet monsoon

3.5 Average duration of wet summer monsoon in months

Source: adapted from a number of sources by the Principal Examiner

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