SECTION 4

LECTURER

Good morning. This morning we are continuing our look at Australia and its natural problems. Actually dryness, or aridity, as it is generally called by geographers, is probably the most challenging of Australia's natural problems and so it is very important in this course for you to have a good understanding of the subject. For Australia, water is a precious resource and its wise management is of the greatest importance.

As I have said, Australia is a dry continent, second only to Antarctica in its lack Q31

of rainfall. Long hours of hot sunshine and searing winds give Australia an extremely high rate of evaporation, far more than in most other countries. It is estimated that approximately 87% of Australia's rainfall is lost through evaporation, compared with just over 60% in Europe and Africa and 48% in North America. You generally think of Africa as being a very hot and dry place, but it is not in comparison with Australia. In many parts of Australia standing water, that is dams, puddles and so forth, dry up rapidly and some rainfall barely penetrates the soil. The reason for this is that the moisture is absorbed by thirsty plants. Q32 Q33

Some parts of Australia are dry because rainwater seeps quickly through sandy soils and into the rock below. In parts of Australia this water which seeps through the sandy soil collects underground to form underground lakes. Water from these subterranean lakes can be pumped to the surface and tapped and so used for various purposes above the ground. In fact, extensive underground water resources are available over more than half of Australia's land area, but most of the water is too salty to be used for human consumption or for the irrigation of crops. However, most inland farmers do rely on this water for watering their animals and, where possible, to a lesser extent for irrigation. Q34 Q35

Underground water can flow very large distances and can be kept in underground reservoirs for a very long time. Water from these underground reservoirs bubbles to the surface as springs in some parts of the country, and these fare sources of permanent water were vital to early explorers of inland Australia, and to other pioneers last century, who used the springs for survival. But in many places levels have fallen drastically through continuous use over the years. This has necessitated the pumping of the water to the surface. Remarkably, underground water sources in Australia supply about 18% of total water consumption. So you can see it is quite an important source of water in this dry land. Q36 Q37

So most of the consumption of water in Australia comes from water which is kept above ground. More than 300 dams regulate river flows around the country. The dams store water for a variety of functions, the rural irrigation of crops, without which many productive areas of the country would not be able to be farmed; the regulation of flooding, a serious problem which will be dealt with later in the course; and last but not least, the harnessing of the force of gravity for the generation of electricity. Q38 Q39 Q40

That is all we have time for this morning, but you will be able to do further study on this important area in the library. I have a handout here with references on the subject, so if you are interested, please come up to the desk and take a copy.

Next week's lecture is a case study of an outback farm and...