

The last great empty lands left in the world are those of the Amazon region of Brazil. Now they are being settled by the Brazilians in a forceful programme of expansion. The Amazon region is drained by the mighty Amazon river and stretches more than 3,500 kilometres from the Atlantic to the Andes, and 3,000 kilometres from Venezuela to the grasslands of central Brazil. It covers nearly six million square kilometres and is 20 times the size of Britain but with only a twentieth of Britain's population. The Amazon region lies across the Equator and the land is covered with thick equatorial and tropical forests, or *selvas*, which are the home of thousands of different kinds of plants and animals. Everywhere there is water, in the hot, humid air, in the torrential thunderstorms and in the huge network of streams and massive rivers which flow into the Amazon River carrying nearly a fifth of all the world's fresh water which flows into the seas.

Much of the land is unsettled but it is potentially rich. There are vast timber reserves and deposits of minerals such as iron ore, tin, gold, bauxite and uranium. The first Europeans to exploit the Amazon region were looking for gold and diamonds. They hunted alligators and forest animals for their skins and gathered Brazil nuts and rubber from the trees. The local Indian peoples were exploited for their labour and many died as a result of their contact with the white people. Today the conquest continues with areas being taken over for mining and cattle country, for developing timber supplies and for providing land to resettle large numbers of poor people from Brazil's teeming cities. Unfortunately, many Brazilians regard the native Indians as a hindrance to developing the region as their ways of life, although primitive, depend on large areas of forest. Ruthless exploiters have been known, even recently, to wipe out Indian tribes to obtain the land they want. The Brazilian government has not always been successful in protecting the Indians but it has attempted to integrate some Indians into the new society and in some areas, particularly the Xingú Park, it

has protected their lands and isolated them from developments. They have been helped in this by other people, such as Survival International, who are interested in protecting the Indian peoples and their cultures.

The cost of developing the Amazon region is high. Brazil, formerly a colony of Portugal, is one of the most rapidly industrialising countries of the Third World. But, although this has created great wealth in some parts of the country, large numbers of people live in grinding poverty. To pay for the Amazon region to be opened for development the Brazilian government has relied not only on Brazilian industry but also largely on industrial companies from Japan, Europe and North America. In return they receive tax concessions and other favourable treatment. The greatest programme has been the development of the Transamazon Highway and a network of roads across the forest. Japan and Germany have invested in iron ore, bauxite and tin and there are increasing numbers of Japanese and German immigrants.

There is uncertainty and risk. It may be many years before some of the developments will pay for themselves, and a lot of money has been borrowed. There are worries that the roads will face difficulties as oil becomes expensive and as world supplies become short. The laterite soils of the forests do not last long once the trees have been cut and the settlers begin to farm them. Other soils are poor and are fit only to rear cattle. Some areas now have less rain because much of the moisture came from evaporation from the trees and dust bowls may have been created. Already rivers are being clogged with soil washed from the land which makes river transport difficult. The ecological balance is being disturbed as plants, birds and animals have disappeared. Many kinds have been lost to the world forever. In some areas insects and parasites have increased alarmingly without natural checks. It is thought by some scientists that the loss of the world's largest reserve of broad-leaved forests will affect the climate in other parts of the world.

1. A road network has been established to open the Amazon region. The dense forest lands were mapped from photographs taken by United States space satellites.
2. The development of the Amazon region is financed from Sao Paulo, the largest city in South America. Tycoons talk from their

offices in tall skyscrapers with their development teams 2,500 kilometres away in the forests. Sao Paulo is flooded with 11 million people, many of whom, as in the other rapidly growing cities of Brazil, live in poor shanty towns. The government hopes to settle some of the poor people from the towns on small farms in the Amazon region.

3. The price of developing the forest is being paid by the few remaining forest Indians, most of whom face the destruction of their cultures, sickness and death. These Indians shelter, shyly, at the side of a river, the traditional means of transport through the forests.
4. The new network of forest roads centres on the Transamazonian Highway and, as with this branch, are the only means of access by land to the developments taking place. Much of the labour for these roads was provided by the Brazilian army using huge machines imported from overseas. The land alongside this road has been cleared for an air strip and the small farms of a colonisation project.
5. These settlers from Sao Paulo are processing their first manioc crop. They are still clearing some of their 100 hectare farm for which they received a government grant for seeds and machinery to start them off.
6. Once rubber was a booming industry in the Amazon region. A little is still being produced, as seen here. Fortunes were once made gathering rubber from the forest, though the workers were virtually slaves, and Manaus became a fine city with an opera house on the banks of the Amazon. However, the speculation in rubber ended with competition from plantations in Asia.
7. The new speculation is in minerals. Rich deposits lie beneath this newly cleared area waiting for eventual exploitation. The first survey teams faced unpleasant and unhealthy conditions to clear a space for helicopters and light planes and they set up a camp of thatched huts.
8. Cattle ranches covering millions of hectares are being carved from the forests. One cattle baron, near the Jari River, owns 12,000 square kilometres, employs 10,000 people and has built a town, a railway and 15 air-strips. He has planted large areas of rice and has begun a timber and wood pulp industry.
9. Many developers think that the Indians stand in the way of progress. Ranchers who may want their land think that they are lazy, but the Indians' survival depends on a delicate balance with nature. Some Indians have become apathetic and afraid. The 210 Boro, for example, do little except make bows and arrows for tourists visiting Manaus (1400 kilometres away) but own 83,000 hectares of good grazing land while 500 Paracis own more than half a million hectares. The fate of this Indian, already in contact with white men, could well be to move into a shanty town on the edge of a city or, perhaps, to see his village dynamited from the air.
10. Hovercraft have been important in surveying the forest areas and have given rapid access to many riverside areas. They enable supplies to be brought in quickly. They have greatly influenced the lives of the Indian peoples nearby, as have the new roads.
11. As the forests are destroyed so is much that is of value, both in itself and to the rest of the world. For example, little is understood of the systems of life in the forest or of the secrets of plants that might benefit mankind in such ways as providing cures for sickness. Here an Indian is preparing a drug from forest plants.
12. There are efforts to protect the lands and lifestyles of some Indians. Here a member of Survival International helps prepare a meal in the Xingu Park, where the organisation has worked alongside the Indian Protection Service to ensure that some peoples adjust as they wish and at their own pace.

The pictures in this set are not intended as a complete treatment of the subject. They provide a core of material to which the teacher can add further materials and questions. Additional sets in the series will provide a useful library of pictures to illustrate various aspects of survival. Some of these sets are concerned with development studies in the Third World. Well illustrated studies of these general themes may be found in "The Third World"; "Exploiting the Earth's Resources" and "The New Africa" by R. Clare (Macdonald Educational; World Topics. Colour Units) and other books in the same series; "Tropical Forests" by R. Clare (Edward Arnold : Meet the World), "The Family of Man" (Marshall Cavendish) provides many detailed studies. Survival International is interested in hearing from concerned people.

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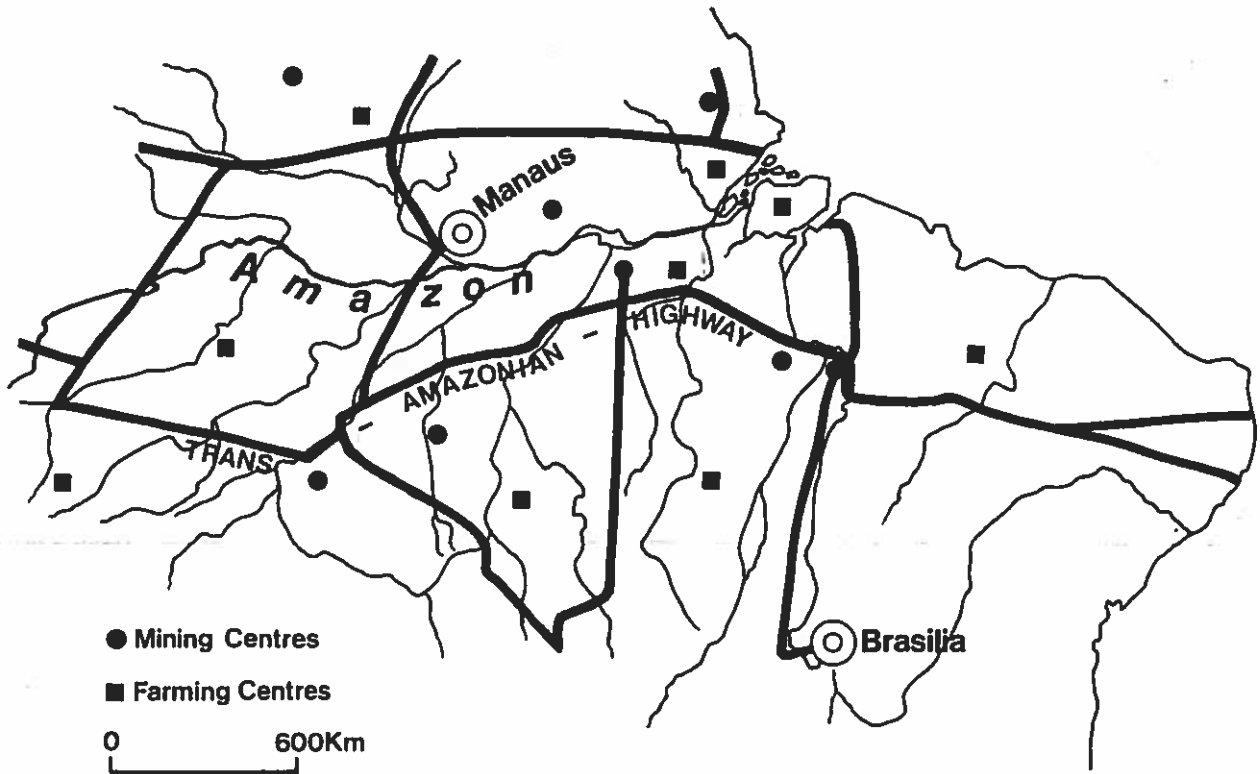
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THE AMAZON REGION : Part of the new road network
and important new mining and farming centres

BRAZIL : THE LAST FRONTIER : QUESTIONS

(Numbered to correspond with the related slides)

1.
 - a. Compare the map of the Amazon region with an Atlas map of South America.
 - b. Compare the map of the new roads with an atlas map of Brazil.
 - c. How long is the Amazon River?
 - d. Locate Brasilia (the capital of Brazil), and Sao Paulo.
 - e. Which is the most important new road?
 - f. Where would you expect to find feeder roads not shown on the map?

2.
 - a. Locate Brazil's most important cities on an atlas map.
 - b. Which is the largest city in Brazil?

3.
 - a. What does this picture tell you about the Amazon forest and some of the Indian people who live there?

4.
 - a. How has this road helped to develop the frontier area?
 - b. What will happen to this road after heavy rains?
 - c. Is this a major highway or a feeder road in the network?

5.
 - a. Why might this settler have come to the Amazon region?
 - b. Find out about the kinds of difficulties colonising settlers in the forests may have to face.

6.
 - a. Find out how rubber is produced.
 - b. How was most rubber obtained in Brazil?
 - c. Why did the rubber boom end?

7.
 - a. Locate some of the important mineral centres shown on the map.
 - b. Name some important minerals found in the Amazon region.
 - c. What do you think are some of the main difficulties in (1) locating mineral deposits in the forest, and (2) developing them?
 - d. Why might mining not yet have begun at this and other mineral centres?

8.
 - a. Why do you think these cattle had to be specially bred for the tropics?
 - b. Why are the owners of the new cattle ranches sometimes known as "barons" or "kings"?
 - c. How has the creation of cattle ranches affected the forests?
 - d. Why is cattle ranching more damaging than forestry?

9.
 - a. Why do some people consider the Indians of the forests to be a nuisance?
 - b. Do you think that the Indians should be allowed to keep their lands?

10.
 - a. What does the picture show about river transport?
 - b. How have hovercraft affected the development of the Amazon region?

11.
 - a. What is being prepared?
 - b. Why is it important to preserve all kinds of life?
 - c. Find out about the origins of tobacco.

12.
 - a. How are some Indian tribes being helped?
 - b. Is it important to preserve Indian cultures? Why?