



## Reading 2

### EXERCISE 1

You are going to read an extract from an article. Seven paragraphs have been removed from the extract. Choose from the paragraphs A – H the one which fits each gap. There is one extra paragraph which you do not need to use.

#### The fog catcher's forest

*A bare, dusty island where the rain never falls could soon be covered with trees. Fred Pearce reports.*

When Spanish sailors landed in the Canary Islands in the 15<sup>th</sup> century, they were amazed to discover an aboriginal population with extensive agriculture which they had somehow managed to sustain with virtually no rainfall. Legend has it that the Guanche people derived all their water from a single large tree, which stripped moisture out of passing fogs and dripped enough water from its leaves to support a thousand people. However true the story may be, there is no doubt that the only thing stopping the Canaries from resembling the Sahara desert, just 70 kilometres to the east, is the moisture-rich fog that drifts in from the Atlantic Ocean.

#### Gap 1

Sometime in the last century, the last of the trees on high ground were cut down and the land began to dry out. This meant that across much of the north of the island, agriculture went into decline. Now David Riebold, a forestry scientist-turned-schoolteacher who owns a home on the island, has a plan to reverse the trend. He wants to use artificial fog harvesting to bring back the cloud forest, in what promises to be the largest reforestation project ever attempted using the technology.

#### Gap 2

For years Riebold watched these failed efforts by local foresters. Then he read about a successful research project in Chile which harvested the fogs that regularly rolled in from the Atacama desert. Nets erected on a ridge facing the ocean provided enough water for a small town. Realising that Lanzarote's climate was very

similar to Chile's, Riebold began to wonder whether fog harvesting could be used to keep the saplings alive.

#### Gap 3

On paper, fog harvesting looked like a solution to the island's reforestation problems, but convincing the authorities to give it a try wasn't easy. For many years Riebold tried and failed to convince anyone to back his idea. It took the arrival of a new mayor to finally get his scheme approved. 'Proyecto David', as the locals call it, got under way, and the town authorities erected eight modest fog-collecting devices on three of Lanzarote's mountains.

#### Gap 4

This summer, having declared the initial experiment a success, the island council plans to install eight much larger devices which will discharge water into a pumped drip irrigation network designed to keep the saplings watered. Riebold hopes that this will form the pilot phase of a full-scale reforestation of the mountains of northern Lanzarote.

#### Gap 5

If the initial results scale up, a new cloud forest could restore the island to its former glory. The Lanzarote government has targeted an area of about 20 square kilometres in the north of the island, though Riebold believes that the potential area for reforestation using fog collectors could stretch to 50 square kilometres.

## Gap 6

But the knock-on effects of reviving the forests go beyond restoring the wildlife. Eventually, the forests should capture enough moisture to help recharge the area's underground aquifers, many of which have remained empty since the forests disappeared. If this happens, wells down in the valleys could also refill, reducing the island's growing dependence on desalination, especially during the summer tourist season.

A

This more ambitious scheme could be managed in one of two ways, he says. Either the hilltops could be covered with nets to grow new forests all at the same time, or this could be done in stages with a smaller number of nets being moved around to reforest each area in turn. After perhaps two years of water from the fog collectors, saplings would be tall enough to collect the fog water themselves.

B

The results look promising. A litre a day should be enough to support one seedling, and Riebold has found that on some sites, a square metre of net catches an average of two litres of water each day. One site averaged five litres a day even at the hottest time of year.

C

Centuries ago, the island's inhabitants carved tunnels up the mountainside and into underground aquifers. These drained into collecting areas lower down. Once the island's main source of water, they could be brought back to life by reinstating the cloud forest.

D

In times gone by, all seven of the islands had rich cloud forests that trapped moisture from the trade winds and quenched an otherwise dry region. More recently, though, much of the islands' forest has been lost – removed for firewood, construction and to make way for farmland. Most of the islands still have some degree of forest cover, but one, Lanzarote, is all but bare.

E

Marciano Acuna, the local town councillor in charge of the environment, says he hopes the trees will trigger a more widespread greening of northern Lanzarote and have an impact on the whole ecology of the region. Once the trees are back, the quality of the soil will improve, and a long-lost forest ecosystem will have a chance to return, providing habitat for species long since confined to other islands in the Canaries.

F

Even in the hottest months, clouds form over the mountains of northern Lanzarote. As the trade winds blow over the island the mountains force moisture-rich vapour into droplets. The surface of the mountain is too hot for this to happen at ground level, so the fog rarely touches the ground. 'That's why the saplings died,' says Riebold. 'They never got tall enough to touch the fog and capture the moisture on their leaves.'

G

Farmers would certainly benefit, as water in Lanzarote has become very expensive, and there are tight restrictions on the irrigation of farmland. This has made agriculture increasingly difficult and, combined with the rise of tourism as a source of revenue, has turned it into a weekend occupation at best for many residents.

H

The bare hills in this region have been of increasing concern to the island's authorities. Despite numerous attempts in the past decade, all replanting schemes have so far been unsuccessful. With limited water supplies on the island, the newly planted trees dried out and died, leaving the hilltops littered with hundreds of dead saplings.

## Gap 7

Whether or not fog harvesting will prompt a large-scale return to agriculture on the island remains to be seen, but the lessons learned from harvesting fog on the island's hilltops may be adapted for people living not far away, and with a greater need to see their landscape green and watered. If Lanzarote can catch moisture from the air and convert it to forests and farmland, then perhaps its famine-prone neighbours in West Africa could do the same.

# Reading 2 — Keys

## EXERCISE 1

### KEY

- 1 D
- 2 H
- 3 F
- 4 B
- 5 A
- 6 E
- 7 G

### EXPLANATIONS

#### The fog catcher's forest

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Sometime in the last century, the last of the trees on high ground were cut down and the land began to dry out. This meant that across much of the north of the island, agriculture went into decline. Now David Riebold, a forestry scientist-turned-schoolteacher who owns a home on the island, has a plan to reverse the trend. He wants to use artificial fog harvesting to bring back the cloud forest, in what promises to be the

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The previous paragraphs deal with theory, not facts.

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But the knock-on effects of reviving the forests go beyond restoring the wildlife. Eventually, the forests should capture enough moisture to help recharge the area's underground aquifers, many of which have remained empty since the forests disappeared. If this happens, wells down in the valleys could also refill, reducing the island's growing dependence on desalination, especially during the summer tourist season.

Farmers would certainly benefit, as water in Lanzarote has become very expensive, and there are tight restrictions on the irrigation of farmland. This has made agriculture increasingly difficult and, combined with the rise of tourism as a source of revenue, has turned it into a weekend occupation at best for many residents.

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