

READING PASSAGE 2

Questions 15 - 26

You should spend about 20 minutes on **Questions 15 – 26** which are based on Reading Passage 2 on the following pages.

The Death of the Wild Salmon

The last few decades have seen an enormous increase in the number of salmon farms in countries bordering the north Atlantic. This proliferation is most marked in two countries famous for their salmon, Norway and Scotland. Salmon farming in Norway and Scotland has expanded to become a major industry and as the number of farmed salmon has exploded, the population of its wild relatives has crashed. The rivers of these countries that used to have such great summer runs of fish every season that they used to attract thousands of anglers from all over the world are now in perilous decline. Recently Truls Halstensen, a Norwegian fishing writer, wrote that his local river, the Driva, where he used to be able to catch five or more fish of over 20 pounds weight in a morning, is now almost totally fishless.

The link between the increase in farmed salmon and the decline in the wild population is hotly disputed. Environmentalists claim that the increase in farming has affected wild salmon and the sea environment in various ways. Firstly it is claimed that the mass escapes of farmed fish present a grave threat to the gene pool of wild salmon stocks. Escapees breed less successfully than wild salmon but the young of the escapees, known as parr, breed aggressively and can produce four times more successfully than their wild counterparts. The parr bred by escapees also become sexually active far sooner than wild salmon and fertilise more eggs. The farmed salmon are therefore genetically changing the wild salmon stocks. Jeremy Read, director of the Atlantic Salmon Trust points out that: "the major problem of interbreeding is that it reduces a population's fitness and ability to survive. Native salmon have evolved to meet the circumstances and habitat of sea and river life. Farm fish are under very different selection pressures in an artificial habitat. This could leave the world with a north Atlantic salmon which could not survive in its native conditions." The huge increase in sea lice in coastal waters is another growing problem. Sea lice thrive in salmon farm conditions and their increase in numbers means that wild salmon and other fish entering waters where there are farms can fall prey to the lice.

Another difficulty and one of the most worrying side effects of the salmon farm industry is that salmon farmers cannot function without vast quantities of tiny sea creatures to turn into food pellets to feed their stock. Lars Tennson of the Norwegian Fishermen's association complains that "the huge quantities of small fish caught by industrial trawlers is helping to strip fishing grounds of the small fish and of other species, including wild salmon, that depend on the feed fish."

Fish farms are also being blamed for increasing levels of nitrogen in the ocean. Over the last 2 years there have been 26 effluent leaks involving nitrogen-rich fish droppings. Naturally occurring algae feed on this and grow into large toxic blooms that kill most other marine life. Even legal chemicals used in farms, such as those used to combat the sea lice, can unbalance micro-organism populations, affecting the other organisms that feed on them. Kevin Dunnon, director of FEO Scotland, has warned that "using inappropriate chemicals and medicines has

the potential to do real environmental damage... We will prosecute if we find enough evidence.”

In spite of the evidence that farming is harming fish populations, fish farmers are adamant that they are not responsible. Nick Jury insists that “algal blooms and the decline in fish stocks have occurred naturally for decades because of a wide range of unrelated and more complex factors.” Jury feels that fish farms are being made a scapegoat for lack of government control of fishing.

Overfishing is a major problem that affects salmon stocks and not just salmon. A combination of high trawler catches, net fishing at estuaries, sport fishing and poaching have all led to stocks of wild salmon diminishing. The UK government likes to think that this problem has been recognized and that the roots of the problems have been attacked by laws passed by them. Fishermen, at sea and in estuaries, have been set quotas and many salmon rivers have been closed to fisherman. Poachers are more difficult to control but their effect is not as marked as that of the fishermen. Angus Kilrie of the NASF feels that the efforts have been wasted: “Legislation has merely scratched the surface. Not enough money has been forthcoming to compensate fishermen and the allowances have been set too high.”

The fate of the wild Atlantic salmon is anybody’s guess. Farmers and governments seem unworried, environmentalists fear the worst. Wild Scottish salmon stocks this year have actually gone up this year which is heralded by the UK’s fisheries department as a result of their policies. Paul Knight, Director of the Salmon and Trout Fishing Association has stated that he is “delighted with the upturn in numbers this year.” He adds the warning though that “there are still significant threats to salmon stocks and that it is important not to take our eye off the ball.” Statistics though can always be interpreted in different ways. All issues concerning the health of the wild north Atlantic salmon need to continue to be addressed in order to protect the viability of future runs.

Questions 15 – 21

Match the opinions or statements (15 – 21) with the people who expressed or said them listed on the next page. Write the appropriate initial of the person in boxes 15 - 21 on your answer sheet.

- 15 Says farming cannot be blamed for the salmon stock collapse.
- 16 Claims the demand for feed for salmon farms is destroying the natural food for other types of fish.
- 17 Says that efforts must be maintained to protect the salmon.
- 18 Gives an example from his local area.
- 19 States that measures taken to stop overfishing are not adequate.
- 20 Says salmon could soon be genetically incapable of continuing to exist.
- 21 Threatens legal action against farms that misuse chemicals.

JR	Jeremy Read
PK	Paul Knight
AK	Angus Kilrie
TH	Truls Halstensen
KD	Kevin Dunnon
NJ	Nick Jury
LT	Lars Tennson

Questions 22 - 26

Complete each of the following statements (Questions **22 - 26**) with words taken from Reading Passage 2.

Write **NO MORE THAN THREE WORDS** for each answer.

Write your answers in boxes **22 - 26** on your answer sheet.

- 22 The connection between the increase in the salmon raised on fish farms and the drop in the naturally raised salmon is fiercely _____.
- 23 The _____ of farmed salmon reproduce in larger numbers and more effectively than their wild equivalent.
- 24 Fishing by _____ has led to a huge reduction in the numbers of smaller fish which other larger fish use as food.
- 25 Fish waste matter which escapes into the water is used for food by _____ which accelerates their growth leading to the death of other aquatic organisms.
- 26 The British government has tried to control fishing at sea and at river mouths by allocating specific _____ for netters and fishermen.