**TASKS**

# True or false?

# Lions threatened by critical underfunding in wildlife parks

1. (example) 90% of territory for lion protection is underfunded. T
2. Wildlife parks are underfunded in Africa, 380 million dollars are missing.
3. The wildlife expert is pessimistic, because a huge sum is missing from the funding,
4. Lions need to be protected because they are the top predators.
5. Strong ecosystems benefit people as well.
6. The population of lions have reached a point of no return.
7. Development agencies might think: why not spend on people, why on wildlife.
8. Investment in wildlife leads to investing in people through tourism and job creation.
9. **Beaches / coral reefs**
10. (Example) The interview takes place next to an open beach on the seaside. F
11. The beach contains rich but sensitive coral reefs.
12. Intensive use of corals includes swimming near them and knocking into them.
13. One factor in ruining the coral reefs is the chemicals people wear against the sun when swimming.
14. Four months is enough for regeneration for the entire coral reef.
15. The problem is that this place would generate a large income.
16. If you limit the use of a beach, it always becomes the destination for the wealthy.
17. A lottery system has been used to limit visitors in the UK in national parks.
18. This coral reef is especially popular because it featured in a book and in a film.
19. **The Sahara Forest Project**
20. The Sahara Forest Project is based on existing resources.
21. It will be impossible to feed the growing population
22. Water resources are shrinking because of human activities.
23. Solutions have to be financially viable.
24. We have found ways to store energy from renewable sources.
25. Technologies should be adaptable in other parts of the world.
26. The Sahara project facility started to operate in 2009.
27. **Seawater cooled greenhouse**
28. Sea water can contribute to the growth of plants.
29. Salt water turns into fresh water through the process.
30. Food production is the only objective of the project.
31. The project needs to be carried out to prevent the degradation of the soil.
32. Cardboard is one of the ingredients for cooling the temperature.
33. Humidity cannot be increased in a desert.
34. **Recycling**

0. Learning to reduce, reuse and recycle helps you to live a more sustainable life by conserving resources. **T**

1. All items can be easily recycled.

2. The actual level of recycling is driven by economics in the US.

1. The price of recycled items is mainly determined by their material.
2. Rubber tires can be turned back into simple rubber.
3. The aim of a small Japanese town is to generate zero waste.

6. The residents sort their litter into 13 different types of recyclable waste.

7. Currently, about more than three-quarters of the town's garbage is reused, recycled, or composted.

8. American cities are not interested in zero-waste programmes.

**1F, 2T, 3T, 4F, 5T, 6F, 7T, 8F.**

**ANSWER KEYS AND TAPESCRIPTS**

1. Lions threatened in critical underfunding in wildlife parks

<https://www.bbc.co.uk/sounds/play/p06pm4zv> (videó)

3-56

ANSWER KEY: 1F, 2F, 3T, 4T, 5F, 6T, 7T,

About 90% of protected areas with lions are underfunded. It’s a pretty dire situation. We found that these parks require between 1 to 2 billion dollars annually in order to adequately protect lions, but they receive only about 380 million dollars annually, so that’s just about 10 to 20 percent of what is needed.

So it’s short for – just in those parks, just in those protected areas -well over a billion dollars. across the continent. And that’s not gonna change any time soon, is it?

No, in fact it may get to be a higher number as lions continue to decline and the pressure is on, protected areas become worse, but it is not all bad news because it is only 1.2 billion dollars, I mean, relatively speaking, the US spends twice as much on the management of its national park system, or you know, it might be equivalent to purchasing a US football team like the Detroit Lions and through relatively small cuts we can really save lions and their ecosystems, and secure the backbone of Africa’s parks.

In the report you make the link that if there isn’t a major increase in funding, there will be a decline in the population of lions. – you focus your research on lions. Why, what’s the link?

Oh, because lions are the top predator in the ecosystem. And so their survival is linked to the entire foodweb, all … levels below them. So they’re basically the proxy for the overall health of the ecosystem. And we know that strong, resilient ecosystems benefit people directly through ecosystem benefits like clean water, healthy soils. So saving protected areas, saving wildlife is actually saving people, it’s an investment in people as well.

But my assumption would be that this underfunding of parks is a long-term problem, and yet the lions are still there.

Yes, that’s a good point. Lions are a very resilient species generally, but we are now at a tipping point for their species. So unless we act now, their species will continue to decline, and so that’s why we feel the timing of the study is particularly useful because we are at that tipping point. The actions we take now will determine the future of the lions and their larger ecosystems.

But what constitutes the tipping point now as opposed to five years ago or ten years ago?

Well lions have decreased about 40% in the last few decades and so we really are at that point where you know their populations declined to the point where ecologically speaking just going to keep heading south, when a species reaches a certain point in their populations there is really just no turning back. So we feel like we are at a point now where there are still enough independent populations that are resilient enough and strong enough, and there is enough protected areas, which is what we focussed on, that have good populations of lions that If we invest now we are gonna prevent falling off the cliff.

Another argument you make in the report is saying there is a case for investing development funding in protecting parks. Now, if I’m in charge of allocating lots of money for development, I’m thinking first of all: health and roads and schools, not better funding for parks. So how do you make that case?

That’s because a lot of people don’t associate conservation with benefits to people. And so they tend to invest in human focused development like infrastructure, like education but really investment in parks with wildlife is investment in people because of the benefits to ecosystems and human health, but also tourism. It is important to realise that the wildlife watching industry in Sub-Saharan Africa generates an estimated 34 billion dollars annually, tourism more broadly has created 6 million jobs.

So when you are investing in wildlife you really are investing in people.

3’56”

1. Answer key: 1T, 2T, 3T, 4F, 5T, 6F, 7F, 8F,

**Tapescript : Coral reefs, 2’59”,**

**Source (video)**

[**https://www.bbc.co.uk/sounds/play/p06mx1tl**](https://www.bbc.co.uk/sounds/play/p06mx1tl)

# One of world's most famous beaches is now closed indefinitely

This is a very enclosed bay, so it’s quite narrow and deep, and inside the bay there are some fabulous coral reefs, one of the richest ecosystems on the planet.

But coral reefs are incredible sensitive and can easily be loved to death if the use of them is too intensive. So people just swimming over them, knocking into the corals, trampling on corals inadvertently can do a great deal of damage.

And there is a second problem as well and that is that people going to coral reef environments are wearing sunscreen generally speaking and those sunscreens actually have been found to contain very toxic compounds which can kill corals, so if you imagine that kind of concentration building up in the bay, then that has been killing corals over a period of time.

I’ve never heard about it, that’s extraordinary, I’m very worried.

What about regeneration? It was originally gonna be shut for four months, they were saying, oh that’ll probably give it a chance to open again. Because obviously economically it’s very important for local people as well.

But how long will it take the corals maybe the beach to regenerate? Did they think 4 months was not enough?

Well 4 months is certainly not enough. It might have given some relief to the fish which were there. Corals take a long time to grow, they take a millimetre a year the typical growth rate for some.

It would take fifteen or twenty years or more for the reef to come back, so this recovery process is gonna be quite extended.

And we have to balance the human interest as well. People kind of want to use it…

That’s right. Obviously, this place is generating a great deal of money for the local economy. And it’s one of those things that you know if you have the crown jewels in the Tower of London, you can’t let too many people see them at once, otherwise it spoils the experience and you’ll eventually destroy the thing people come to see.

In terms of their management, the problem is if you limited it, it becomes a premium experience, only for the wealthy. So is that fair as well? It’s a really tricky series of questions, isn’t it.

You could have it a premium experience for the wealthy, but on the other hand you could have a lottery system for getting to see the beach. And national parks in the USA often operate on a lottery system, there is only so many people who can walk a trail at any time, so you have to put your ticket in, and If you are lucky, you get to do it.

And do you think that actually alternative and almost as great places just round the corner. Are we being led by the nose that this was in the film and the book?

Oh, I think, certainly the great appeal of this place is because the filmmakers have found an absolutely exquisite isolated place, everyone wants a little piece of that. But there are many other places nearby, and if you’d spread the tourist across those places, then the coral reefs will not be so badly affected.

1. **Sahara Forest Project (1T, 2F, 3F, 4T, 5F, 6T, 7F, )**

**Tapescript**

The Sahara Forest Project is all about taking what we have enough of, like salt water, CO2, sunlight, and deserts to produce what we need more of, sustainably produced food, water and energy. I’s no longer news that the world’s population is ever increasing. It’s no longer news that it’s going to be tough to feed the extra mouths. It’s no longer news that global warming is turning fresh water into our plant’s scarce resource and that this scarcity challenges our planet’s variability to sustain life. When we look at the set of problems around sustainable energy, food and water systems, the real issue becomes how do you manage the footprint on the landscape. We have two choices: keep talking or start acting. We need solutions that seek to address the intertwine global challenges and we need them fast. We need them where the need is greatest, in the hottest and driest parts of our world. We need them to be affordable and easy to replicate. We need to find a way to produce fresh water for biomass production, we need to find ways to store renewable energy from solar, wind and other renewable sources into biomass so that you can sell it all over the world. Imagine the difference it would make, if we could turn our deserts green, if we could use see water and solar power to make this happen to produce enough food, fresh water and energy to sustain local populations. Imagine we could do all this with technologies that are commercially viable, with the potential to be scaled up and implemented around the globe. This might sound like a dream, but we’ve made it a reality. We call it the Sahara Forest Project. In 2009 the Sahara Forest Project was presented at the UN climate negotiations in Coppenhagen. The people said it was too good to be true, we said seeing is believing and set out a pilot plan to roll out the possibilities. Now we are demonstrating the first Sahara Project pilot facility in Qatar. This Facility will contain ten thousand square metres of environmental technologies that has never been put together before.

1. **Sea water cooled greenhouse : 1T, 2F, 3F, 4F, 5T, 6T**

Right now we are standing inside the sea water cooled greenhouse, one of the core technologies of the Sahara Forest Project. In this greenhouse sea water is evaporated into the air to create cooling and humidification in the growing space. This creates excellent growing conditions for valuable salad crops like the cucumbers we have here. In addition, the water vapour that goes into the air from the sea water can be condensed back out on the greenhouse roof as fresh water providing water for irrigation for the plants here in the greenhouse.

So what we want to do is to establish a salt water infrastructure in a desert and we do that through establishing sea water based greenhouses combining them with facilities for concentrated solar power and technologies and practices for revegetation of desert areas. We need to utilize as efficiently as we can land areas that are degraded. We need to minimize the impact on natural parts of the world because we need to preserve ecosystems and we need to make communities both rural and urban as sustainable as possible minimizing their footprints on the landscape. We are surrounded by sea water but can use none of it unless we change our approach to agriculture in a world of ever scarce of fresh water resources and increasing desertification. We must find novel ways to use this resource to produce food and energy in desert environments.

This piece of corrugated cardboard is actually a key component in cooling the greenhouse. At the entrance to the greenhouse sea water runs down this pad. Hot desert air is pulled in into the greenhouse. As it moves through the pad the sea water evaporates, the air becomes cooler and more humid creating good growing conditions for the plants inside.

1. Recycling: **1F, 2T, 3T, 4F, 5T, 6F, 7T, 8F.**

Hopefully, the area where you live has a [robust](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) recycling program. Learning to [reduce](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle), [reuse](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle), and [recycle](https://wonderopolis.org/wonder/where-do-recycled-items-go) helps you to live a more [sustainable](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle), "green" life by [conserving](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) [resources](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle).

Depending upon your local trash and recycling [facilities](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle), you may be able to recycle as few as a couple types of items to as many as several dozen types of items. From a purely scientific [standpoint](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle), just about every material can be broken down and recycled.

In the United States, what actually gets recycled is [dictated](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) by [economics](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle). If the cost of a recycled material exceeds that of new material, then that material won't likely get recycled. In the absence of [regulations](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) requiring recycling, [economics](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) dictates that people will simply buy cheaper new material rather than more expensive recycled material.

The price of recycled material is largely determined by what it's made of. Newspapers, aluminum cans, plastic bottles, and steel cans can usually be recycled cheaply and easily, because they're made mostly of one material, such as wood pulp, aluminum, plastic, or steel.

Other items can be much more complicated. For example, [rubber tires](https://wonderopolis.org/wonder/what-happens-to-old-tires) can't be converted back to simple rubber, because they undergo a chemical change in the manufacturing process. Likewise, electronic devices aren't easily recycled, because they consist of so many different types of materials that aren't easily separated.

Wouldn't it be great if everything could be recycled, though? Could you imagine living in a world where no trash was generated? Is it even possible to generate zero waste?

While it's still basically impossible to generate absolutely zero waste, that is the ambitious goal of Kamikatsu, a small town in southwestern Japan. Since 2003, the town has [embarked](https://wonderopolis.org/wonder/what-types-of-things-can-you-recycle) on a strict zero-waste program.

Residents of Kamikatsu sort their garbage into over 30 different types of recyclable waste. They also compost food scraps and other biodegradable materials. Their efforts have been very successful. Currently, about 80% of the town's garbage is reused, recycled, or composted.

Even if it's impossible to reach the point of having zero waste, zero-waste program advocates note that the process has clear environmental, economic, and social benefits. Major cities in the United States, including San Diego and New York City, have announced plans to move toward zero waste in the next 15-20 years.