

Mangrove loss faster than land-based forests

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Achim Steiner, U.N. Under-Secretary and General Executive Director, U.N. Environment Program (UNEP) said in a statement: "This Atlas brings our attention onto mangroves and puts them up front and central, plotting where they are, describing where they have been lost, and underlining the immense costs those losses have had for people as well as nature." The global cover of mangroves is around 150,000 square kilometres. This is the equivalent to the area of Suriname or half the Philippines. Mangroves are found in 123 countries worldwide. The biggest concentrations of the world's mangroves are found in Indonesia (21%), Brazil (9%) and Australia (7%).

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Category: Nature / Mangrove forests / United Nations
Level: Intermediate / Upper intermediate

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Spalding: "There are a lot of fish that depend on mangroves – mud crabs, oysters, mussels – and there are also a lot of fish that don't seem to be connected to the mangroves but actually are. These fishing industries employ a lot of people." The U.N. estimates that mangrove-related species support 30% of all fish catch and almost 100% of shrimp catch in South-Eastern Asian countries. Mangroves and associated habitats in Queensland, Australia are thought to support 75% of commercial fisheries species.

Spalding: "The forest aspect of mangroves is also important economically. The wood is dense, rot and termite resistant, making it good for use as timber or as charcoal, among the best in the world. It's highly productive so you can continue to harvest it, which is rare." Spalding added, "Knowing what we know now, mangroves can be preserved and help us fight climate change. They are incredible resilient ecosystems, which aren't bothered by increasing temperature. These are habitats that are going to be around with us if we just look after them and the economic benefits will just accrue." There has been sustainable use of mangroves in Bangladesh as well as in other parts in Asia to protect large areas from the weather for over a century now.

EXERCISES

- 1. Mangrove forests:** Briefly, what three things do you know about mangrove forests? Where might you find them? Go round the room swapping details.
- 2. Dictation:** The teacher will read four to six lines of the article slowly and clearly. Students will write down what they hear. The teacher will repeat the passage slowly again. Self correct your work from page one - filling in spaces and correcting mistakes. Be honest with yourself on the number of errors. Advise the teacher of your total number of errors. Less than five is very good. Ten is acceptable. Any more is room for improvement! More than twenty - we need to do some work!
- 3. Reading:** The students should now read the article aloud, swapping readers every paragraph.
- 4. Vocabulary:** Students should now look through the article and underline any vocabulary they do not know. Look in dictionaries. Discuss and help each other out. The teacher will go through and explain any unknown words or phrases.

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5. **The article:** Students should look through the article with the teacher.

- a) What is the article about?
- b) What do you think about the article?

6. **Let's think!** Think of three places in the world where you might find mangrove forests. Then add three things you might see there. Explain to your partner why you chose these?

Three mangrove forest areas	Three things you might see in one
1	1
2	2
3	3

The teacher will choose some pairs to discuss their findings in front of the class.

7. **Pros and Cons:** Think of two advantages and disadvantages of mangroves. Write them below. Explain to your partner why you chose these?

Advantages	Disadvantages
1	1
2	2

The teacher will choose some pairs to discuss their findings in front of the class.

8. **Let's do 'The Article Quiz':** Have the students quiz each other in pairs. They score a point for each correct answer and half a point each time they have to look at the article for help. See who can get the highest score!

Student A

- 1) In how many countries are mangroves found?
- 2) What happened in 2004?
- 3) What happened in Burma in 2008?
- 4) Where are the three biggest concentrations of mangrove forests?
- 5) How much could mangroves generate financially a year?

Student B

- 1) What is the global coverage of mangrove forests?
- 2) What percentage of mangroves has been lost since 1980?
- 3) Who wrote the report?
- 4) What is the destruction of mangroves to land-based forests?
- 5) What industry is generated by mangrove forests?

9. **A day in a mangrove forest:** In pairs/groups. Choose one of the people listed. You are spending a day in a mangrove forest, maybe in a boat or perhaps working on the shore. Create a short story about it. Tell your story to your partner/group. Try to make it interesting! *Students can interlink student storylines!*

1 Fisherman	3 Tourist
2 UN employee surveyor	4 Logger

The teacher will choose some pairs to tell their stories in front of the class.

10. **Let's talk! In a cafe:** *In pairs:* Imagine you are in a cafe. You order a coffee. The conversation gets onto: **Mangrove forests.** Discuss. *5-minutes.*

11. **Let's write an e-mail:** Write and send a 200 word e-mail to your teacher about: **Mangrove forests.** Your e-mail can be read out in class.

DISCUSSION

Student A questions

- 1) Did the headline make you want to read the article?
- 2) How can mangroves generate more income per hectare?
- 3) Should we not be saving more of our forests?
- 4) Try to name three differences between land-based forests and mangroves?
- 5) Would you like to help plant more mangrove forests?
- 6) What actually could you do to promote mangroves and save them?
- 7) Do you eat shrimps?
- 8) How is global warming possibly affecting mangroves?
- 9) How important is it for places like Bangladesh and Burma to have mangroves?
- 10) Should cut down mangroves be replanted and replaced? Why? Why not?

Student B questions

- 1) What do you think about what you read?
- 2) Should the United Nations do more to protect the mangrove forests?
- 3) Isn't the UN report just a lot of hot air and money wasted? Why? Why not?
- 4) Would you like to visit a mangrove forest?
- 5) How important are mangrove forests? Explain.
- 6) How has shrimp farming not helped the mangroves?
- 7) What does 'The Atlas' in the article do now?
- 8) Should more mangroves be planted?
- 9) What areas in the world do you think are most at risk?
- 10) Did you like this discussion?

SPEAKING

Let's discuss! Mangrove forests

Allow 10-15 minutes – As a class / small groups / pairs / 1 to 1

Discuss the following: - How to save mangrove forests?

You are going to visit some mangrove forests. You need to organise your trip. This is a publicity exercise to generate knowledge about the destruction of mangrove forests. Your aim is to raise awareness and funds to help the mangroves be saved and help the livelihoods of the people living in them.

1	An action plan of three points	4	Three publicity stunts
2	Preparation - how will you get there	5	How to help the locals
3	Identify animals/fish/forests under threat	6	Your brief itinerary

The teacher can moderate the session.

GAP FILL: READING

Put the words into the gaps in the text.

(1)_____ forests are disappearing faster than land-based forests according to a new United Nations report the *UN News Service* and *CNN* reported recently. "The World Atlas of Mangroves" says the destruction of the world's mangrove forests is happening up to four times faster than the land-based forests. The study commissioned by the U.N. Environmental Program (UNEP) reports that one fifth (around 35,500 square kilometres) of the world's mangroves – (2)_____ (3)_____ both land and sea – have been lost since 1980. The study does however report that the annual destruction has slowed to 0.7% a year. It warns that any further (4)_____ due to coastal development and shrimp farming will result in significant economic and (5)_____ declines. Studies estimate mangroves generate up to US\$9,000 per hectare annually from (6)_____ – much more than the tourism, (7)_____ and agriculture which the UN says are the biggest drivers of (8)_____ loss.

fishing
mangrove
destruction
forests
aquaculture
ecological
straddling
mangrove

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marine
cyclone
protection
plotting
hugely
global

Mark Spalding, lead author of the report and senior (3)_____ scientist with *The Nature Conservancy*: "The value of mangroves has been (4)_____ overlooked. Mangroves are incredibly valuable, left standing. Apart from providing a degree of coastal (5)_____ for communities – there is evidence that mangroves reduced the impact of the Indian Ocean (6)_____ in 2004 – mangroves are also of (7)_____ economic importance to locals." In 2008, mangroves helped save the lives of many in Burma, when a huge (8)_____ hit the country.

vital
tsunami

GAP FILL: LISTENING

Listen and fill in the spaces.

Mangrove forests are disappearing faster than _____ according to a new _____ the *UN News Service* and *CNN* reported recently. “_____ Mangroves” says the destruction of the world’s mangrove forests is happening up to four times faster than the land-based forests. The study commissioned by the U.N. Environmental Program (UNEP) reports that one fifth (around 35,500 square kilometres) of the world’s mangroves - forests straddling _____ – have been lost since 1980. The study does however report that the annual destruction has slowed to 0.7% a year. It warns that any further destruction due to coastal development and shrimp farming will result in significant economic and ecological declines. Studies estimate mangroves generate up to US\$9,000 per hectare annually from fishing – much more than the tourism, aquaculture and agriculture _____ are the biggest drivers of mangrove loss.

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GRAMMAR

Put the words into the gaps in the text.

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SPELLING TEST

The teacher will ask the class individually to spell the following words that are in the article. Afterwards, check your answers with your teacher, using the following ratings: **Pass = 12, Good = 15, Very good = 18, Excellent = 20**

1	tsunami	11	cyclone
2	resilient	12	termite
3	sustainable	13	environmental
4	ecosystems	14	havoc
5	agriculture	15	concentrations
6	mangroves	16	incredibly
7	immense	17	communities
8	underlining	18	destruction
9	aquaculture	19	disappearing
10	tourism	20	evidence

LINKS <http://www.zeenews.com/news527420.html>
<http://www.un.org/apps/news/story.asp?NewsID=35320&Cr=biodiversity&Cr1=#>
<http://en.wikipedia.org/wiki/Mangrove>
<http://edition.cnn.com/2010/WORLD/asiapcf/07/16/mangroves.threat.un.report/index.html#fbid=N4jyd5rUVGR> <http://www.planethoplia.info/earth/mangroves-are-disappearing-faster-than-other-forests/>
<http://www.friendsofmangrove.org.my/search.cfm?LineNbr=10&StartRow=91&action=result&requesttimeout=1000&Searchportal=&&&&>

ANSWERS

GAP FILL: Mangrove loss faster than land-based forests: **Mangrove** forests are disappearing faster than land-based forests according to a new United Nations report the *UN News Service* and *CNN* reported recently. "The World Atlas of Mangroves" says the destruction of the world's mangrove forests is happening up to four times faster than the land-based forests. The study commissioned by the U.N. Environmental Program (UNEP) reports that one fifth (around 35,500 square kilometres) of the world's mangroves - **forests straddling** both land and sea - have been lost since 1980. The study does however report that the annual destruction has slowed to 0.7% a year. It warns that any further **destruction** due to coastal development and shrimp farming will result in significant economic and **ecological** declines. Studies estimate mangroves generate up to US\$9,000 per hectare annually from **fishing** - much more than the tourism, **aquaculture** and agriculture which the UN says are the biggest drivers of mangrove loss. Achim Steiner, U.N. Under-Secretary and General Executive Director, U.N. Environment Program (UNEP) said in a statement: "This Atlas brings our attention onto mangroves and puts them up front and central, **plotting** where they are, describing where they have been lost, and underlining the immense costs those losses have had for people as well as nature." The **global** cover of mangroves is around 150,000 square kilometres. This is the equivalent to the area of Suriname or half the Philippines. Mangroves are found in 123 countries worldwide. The biggest concentrations of the world's mangroves are found in Indonesia (21%), Brazil (9%) and Australia (7%). Mark Spalding, lead author of the report and senior **marine** scientist with *The Nature Conservancy*: "The value of mangroves has been **hugely** overlooked. Mangroves are incredibly valuable, left standing. Apart from providing a degree of coastal **protection** for communities - there is evidence that mangroves reduced the impact of the Indian Ocean **tsunami** in 2004 - mangroves are also of **vital** economic importance to locals." In 2008, mangroves helped save the lives of many in Burma, when a huge **cyclone** hit the country. (V1)

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