

Thème 1 - La Terre dans l'Univers, la vie, l'évolution du vivant

A3 – De la diversification des êtres vivants à l'évolution de la biodiversité

Deforestation

Deforestation is arising as the major global problem to society and the environment.

With the help of the documents, explain why deforestation is considered as one of the biggest threats we face.

Document 1: Deforestation and Climate Change



- 5 Forests play many important ecological roles. From helping to mitigate climate change; providing homes for many species of plants and animals (some endemic to forested regions); providing food, medicine and livelihoods for people around the globe; to the intrinsic values of forests, these essential ecological powerhouses are irreplaceable—and at risk. Forests cover 31% of our planet; the Amazon rainforest alone is home to hundreds of thousands of species of plants and animals. Yet, despite everything forests do for the planet, they are being cut down at an alarming rate. Every year
- 10 46-58 thousand square miles of forest are lost to deforestation, which is equal to an astounding 48 football fields of forest disappearing every minute. Although there is much cause for concern when considering the degradation of forests worldwide, many still have hope that with the right changes in policy and perception, forests can still be saved.

Lauren Bennett | April 18, 2017
<http://climate.org/>

Document 2: Clearing tropical forests is a lose-lose

Clearing tropical forests for farmland is bad for the climate – no surprises there. But now we've learned that it's also an inefficient way to feed people.

5 Paul West of the University of Wisconsin-Madison and colleagues worked out the potential yields* of 175 different crops* if they were planted in different parts of the world. Then they estimated how much carbon would be released into the atmosphere by clearing these areas of wild plants. "In the tropics, clearing a hectare of land releases twice as much carbon as in the temperate zones, and only produces half as much food," says West. "If we want to balance increasing food production and decreasing carbon emissions, we should emphasize increasing crop production on existing lands."

10 *New scientist - November 2010 by Michael Marshall*

*yield: the amount or quantity produced

*crops: plants such as cereals for instance

Document 3: Trouble in the tropics

"Continued expansion of croplands into tropical forests results in a lose-lose situation for growers and our climate system," agrees Gregory Asner of Stanford University in California, who was not involved in the study.

5 However, he warns that boosting yields on existing lands can cause other problems, such as nitrogen pollution from fertilizer run-off. "We need to take such unintended consequences into consideration as well," he says.

*Journal reference: Proceedings of the National Academy of Sciences, DOI:
10.1073/pnas.1011078107*