Text Complexity Analysis of

Too Much Algae…Threaten Coral Reefs *(title)*

National Science Foundation *(author)*

Recommended Complexity Band: **9-10**

Qualitative Measures

Meaning/Purpose: *(Briefly explain the levels of meaning (Literary Text) or purpose (Informational text.)*
The purpose of this article is implied in the title, to explain a recent study that shows the presence of too much algae and too many microbes can threaten coral reefs. The article specifically explains how overfishing causes an increase in fleshy algae, which in turn increases the production of microbes. The microbes then damage or completely destroy the coral reef.

Text Structure: ***(****Briefly describe the structure, organization, and other features of the text.)* This article uses mostly a descriptive text structure. The article is well-organized and generally easy to follow. It starts with introducing the scientific problem, the destruction of coral reefs, and then it discusses possible causes of that problem.

Language Features: ***(****Briefly describe the conventions and clarity of the language used in the text, including the complexity of the vocabulary and sentence structures.)*
The article uses some domain-specific words and terms (e.g., *microbialization, global environmental health, organic carbon, microbes, marine ecosystem, food chain, organisms, pathogens*) and some academic vocabulary as well (e.g., diverse, subtle, exacerbates, copious, mortality). Language used is largely straightforward.

Knowledge Demands: ***(****Briefly describe the knowledge demands the text requires of students.)*
This article requires knowledge of ecology, food webs, food chains and energy transfer. Students should be familiar with what a coral reef is, and know some organisms that live there. It would also help students visually if they could locate a few coral reef systems on a map and examine some photos of coral reefs as well. Students also need to be familiar with microbes and pathogens.

Text Description

Briefly describe the text:
This informational text is designed to support reading in the content area. The article describes a recent study that helped researchers prove a link between overfishing to increased growth of fleshy algae to microbialization. This increase in microbes causes a depletion of the amount of oxygen dissolved in the water. In addition, the increase in microbial growth can spread disease. In conclusion, microbialization is found to be a major contributing factor to the destruction and decline of coral reef health.

Quantitative Measure

Complexity Band Level (provide range):
Above 11-12

The text falls into the above grade bands according to a quantitative reading measure.

Considerations for Reader and Task

Below are factors to consider with respect to the reader and task.

Potential Challenges this Text Poses:
If students do not have knowledge of microbes, a review would be necessary. Students should also have a general understanding of basic ecology and energy transfer. This knowledge will make some of the domain-specific vocabulary easier to understand.

Recommended Placement

Briefly explain the recommended placement of the text in a particular grade band. Despite the high quantitative measure, the author's purpose is easy to identify, the text is well-organized and written using straightforward language. With basic background knowledge on ecology and coral reefs, this text should be appropriately complex for students in 9-10. As such, this text is recommended for grade band 9-10.

Reviewed by: Jennifer Heflick, Brevard County Schools, 6/12/2016 (Name, School District, Date)