

SOPHOMORES: Your summer reading assignment is "***Nature's Fortune- How Business and Society Thrive by Investing in Nature***" by Mark R. Tercek and Jonathan S. Adams. Please read the book and answer the questions below in your composition book/journal. The questions are organized by chapter, so you may read a chapter then answer the question(s). These responses are due at the beginning of the school year and will be graded by your Marine and Environmental Science teacher.

I. Introduction

The author, Mark Tercek, is not the usual environmentalist. How do you think Tercek's route to the top job at *The Nature Conservancy* has prepared him to be one of the most high profile environmentalists on Earth? Do you think this path gives him any advantage in the 21st century?

1. Maybe It's Not Chinatown After All

In this chapter, Tercek posits the question, "What Parts of Nature Can People Own?" with respect to the question of water rights. As you read this chapter, think about the fact that water is one of the absolute necessities of life, and consider all of the ways that you use water each day.

Should water then be treated as a commodity that is monetized like petroleum or corn? Should we have a water market where big corporations like Coca-Cola and Nestle have to pay for the water they use at an equal price to that of regular homeowners? Further, if water becomes more of a commodity in this sense, how much will water-intense products cost when the true cost of this essential raw material is factored in and considered? How much are you willing to pay for a Coke or a cheeseburger (600-1300 gallons!)?¹

2. Not a Drop to Drink

The status quo mindset in the business world tends to be that environmental regulations are expensive, burdensome and the enemy of business. One of the biggest considerations many businesses and municipalities face is how to comply with all of the federal and state regulations protecting our air and water resources. In this chapter, Tercek talks about the experiences in two major cities, New York and Quito and how they studied the natural capital in their local ecosystem and found a solution that not only protected their water quality, but also saved money.

Water funds are being proposed in many areas now to protect water resources in both the quality and quantity of the water. Based on this story, do you think that your county and our state should create an inventory of natural capital assets? What components should go into this appraisal and what parts of the natural ecosystem should we protect the most locally to ensure good water quality for our future?

3. Let Floodplains Be Floodplains

Even in elementary school we all learn that the civilization of the ancient Egyptians was based on the fertile floodplain of the Nile River valley. Annual floods of the great rivers of the world deposit rich silt on their floodplains and fuel highly productive agriculture. The downside however is the flooding. From the very earliest settlement of the Mississippi River region, man has tried to control this process. The

U.S. Army Corps of Engineers has constructed a vast system of levees and floodgates to “control” the flooding.

What are the benefits of removing levees and “letting floodplains be floodplains”? Create a table of costs and benefits to removing levees and letting areas flood again. At the end of the day, do the benefits outweigh the costs? Is this a situation where both solutions, natural and engineered, need to work together, or is it one or the other?

4. The New Fishing

There is no love lost between environmentalists and fishermen anywhere in the world. This is really puzzling, as fishermen are deeply in tune with the workings of nature, yet somehow also always in conflict. In fisheries management, conflict is often the name of the game. Rarely do industry and government agree - they even seem to speak a different language. Yet in the midst of this seemingly irrevocable disconnect, the Nature Conservancy and California fishermen crafted a new deal that married sound science with smart business, benefits fish, fishermen and the environment.

Explain how the “catch shares” program changes business as usual. Why is moving away from the trawl fishery good for fishermen, fish and habitat? Do you think that this model is superior to what has happened in the past and what can we as consumers do to support this type of fisheries management? ²

5. Feeding the World – and Saving It

The author states that businesses, conservationists, and governments must work together if we are going to be able to feed the earth's population in the year 2050. Explain how the government of Brazil, Cargill, McDonalds, and Greenpeace ultimately became unlikely partners in reducing rainforest deforestation while still promoting the growth of business and the economy.

The author suggests that the only way to solve the problem of agriculture land becoming sparse is to freeze agriculture's footprint. What are the two ways he suggests the footprint can be frozen? Which of the two methods do you feel is most practical? Why?

6. The Million-Dollar Mile

We tend to think of infrastructure as roads and utilities. The author suggests that oyster reefs are the Gulf of Mexico's most vital infrastructure. What ecosystem services do they provide? What services do coral reefs and marshes provide?

The average price for oyster reef restoration is 1 million per mile. Based on what you just wrote about the ecosystem services provided by this environment, do you feel this price is justified, and should we be investing more in reef restoration?

7. Investing in the Future in the Face of Climate Change

The author suggests that as much as 15% of greenhouse gas emissions come from the loss of tropical rainforests and that this amount is more than all the cars, trucks, buses, trains, and airplanes worldwide.

With this staggering of a statistic, the solution seems obvious, especially since saving a ton of carbon in the rainforests is probably easier than developing the technology to reduce a ton of emissions from cars or power plants. What are the options for putting a price on carbon? Do you feel that one option would work best in the United States? Would a different option work in Europe?

8. Town and Country

"Nature is as important in a city as it is in wilderness—perhaps more so, since many cities are defined by an absence of nature. Our task is to make cities function more like natural landscapes." How did Olmstead use nature instead of engineering to solve the problem of Back Bay?

In what way does the author suggest you can make a city more like a forest?

9. The Business Case for Nature

The author gives the example of otters in the kelp forests as keystone species. What is a keystone species? Give an example of another keystone species. Be sure to include details about how that species affects other species and its environment. How can global corporations be viewed as keystone species?

The book gives many examples of how large cities and corporations can benefit from working alongside nature rather than working against nature. In a more rural area like where we live, where many of us are surrounded by agriculture land, forests, rivers and the Chesapeake Bay, how would you convince people that it is necessary to value nature?

1 Wall Street Journal, Carl Bialik, "How Much Water Goes Into a Burger? Studies Find Different Answers" January 8 2008. <http://online.wsj.com/article/SB120001666638282817.html>

2. Monterey Bay Aquarium Seafood Watch http://www.montereybayaquarium.org/cr/cr_seafoodwatch/download.aspx