A Sustainable Environment: Our Obligation to Protect God's Gift

by

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Are We Preparing Ourselves for Climate Change?

A few years ago, I attended a presentation by James Lovelock, a well-known British scientist and environmentalist. About 50 years ago, he worked for NASA and was originally known for developing the electron capture detector which eventually led to his interest in the environment. As a result, today he is best known for the Gaia theory which states that the earth is a living organism that can self regulate itself by controlling the physical and chemical environment. He has written several books about this theory, the latest being "The Vanishing Face of Gaia". On this particular day, he was making a presentation on the future of the planet earth. I had an opportunity to talk to him and at one point he said: "George, if I were you I would buy property in Canada". When I asked him why, he said: "Not for you, but for your grandchildren as they won't be able to live in the Chicago area. It will be too warm." This really made an impact

At another presentation, the then Chicago Commissioner of the Department of Environment talked about the changing climate in the Midwest. She indicated that the current annual average temperature of Chicago is about the same as the Champaign, Illinois (140 miles south of Chicago) average temperature of about 30-40 years ago. So perhaps James Lovelock has a point. If we can't adapt to the changing climate, we have the option to move to a region that is more comfortable. But what about other living organisms?

What is the impact of climate change on the need for food? China with its 1.3 billion people has the largest demand for wheat. But growing wheat in China is becoming a real problem as the country has been experiencing a drought in recent years resulting in falling water tables and depleting aquifers. Part of the problem is that many of the rivers rely on the melting snows from the Himalaya Mountains. But the glaciers have not been forming in the mountains due to global warming. Despite being one of the top three producing countries in the world along with India and the United States, it must now import more wheat than ever which is tantamount to importing embedded water. The wheat is grown in other countries using their water sources, thus taking the load off of China.

This same drought could also have had an impact on the uprisings of the Arab Spring in Egypt. Bread provides one-third of the caloric intake in Egypt, a country where 38% of income is spent on food. The world's top nine importers of wheat are all in the Middle East, and seven of them have had political protests resulting in deaths over the past two years. When people are hungry, they tend to get angry.

Another developing problem being caused by climate change is all of the vineyards in the world. The ideal climate for top vineyards for outstanding wines is a warm, dry summer followed by a cool, wet fall and winter. This is typical of the Mediterranean basin and a few

other regions like Chile, Tuscany, Bordeaux, Mosel or California. The changing climate may well redraw the familiar map of world wine production, making it harder to grow grapes in some traditional regions while opening up new frontiers for vineyards. But satisfying our thirst for wine in a warmer world could take a toll on biodiversity if vineyard changes aren't managed carefully. Within the next 40 years, the growing area of these top vineyard regions could decrease by as much as 70%. This means that the growers will have to plant vines in areas previously not used in higher elevations and higher altitudes. A further impact is displacing the plant and animal species currently residing there.

So where will the new vineyards be located? We will see growers going to New Zealand, northern North America, northern Europe, Tasmania, and central Chile. While China is not producing as much wheat as it needs, some of its northern regions are starting to grow grapes. It is already a top wine producer and the fastest growing of all wine making nations. The mountain ranges in China for expanding the wine growing region is also home of the pandas. Will they both survive or will they compete?

It is critical for these wine growing nations to start planning for the movement of the vineyards and the impact on biodiversity. This is already happening as Chile boasts a Wine, Climate Change, and Biodiversity Program; California has a Sustainable Winegrowing Alliance; and South Africa has a Biodiversity and Wine Initiative.

As you can see there are people that have accepted climate change being for real and they are acting accordingly, while there are the deniers who feel that no action is necessary.