



SUSTAINABILITY: THE FUTURE CHALLENGES FOR STUDENTS OF THE PRESENT

Zafra M. Lerman

Columbia College Chicago, 600 South Michigan Avenue, Chicago, IL 60605 USA

ZAFRAL@aol.com

The Middle East is a region in permanent conflict. Part of the reason for this situation is that this part of the world has a source of energy that, for the industrialized world, is a strategic resource: fossil fuel. This non-renewable source of energy is not only fueling economic and political conflicts, but it is also placing at risk the sustainability of the planet, by polluting the environment and contributing to climate changes.

There are now six billion people on Planet Earth, and they are consuming six billion tons of fossil fuels each year; most of this is being consumed by developed countries. With the expectation of ten billion people by the year 2050 and with the increasing consumption of fossil fuels by developing countries, we will run out of these energy resources, cause irreversible environmental damage, adversely affect the food supply that depends on energy, and endanger the sustainability of life on Planet Earth.

We must develop new and clean energy resources. It is a fact that the amount of solar energy received by the surface of the Earth in one hour is approximately equal to the total energy consumption of the entire planet in one year at present.

The scientific community must promote the use of renewable sources of energy. In this way the existing energy resources in the Middle East will not continue to be a strategic resource. This will decrease their contribution to detrimental climate change, and their value in the economic and political conflicts between countries.

It is the responsibility of the scientific community to (1) promote the development and use of clean energy resources, (2) add the subject of sustainability in the curriculum to prepare future scientists with the background needed to preserve life on Planet Earth, and (3) guarantee cross-border scientific collaboration and cooperation, even between countries whose governments are hostile toward each other.

Examples will be presented in the lecture of cross-border scientific collaborations in the Middle East, as well as examples of curricular material that promote clean renewable energy sources.