

Architecture New York State



AIA
New York State



Sustainability

By: Marcus Marino, AIA,

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Sustainability goes far beyond the mere protection of our built environment from the ravages of Mother Nature's storms. A multiple approach to life as we move forward is required to be able to leave the next generation a healthy earth to live on.

These areas include: storms, global warming and pollution, recycling and landfills, basic human health and urban environment.

STORMS

Superstorm Sandy was the rallying cry of sustainability in our country and held a special place in hearts here in New York. Over twenty people died from the storm, hundreds of thousands of us were left in the dark for days, as the electrical system failed due to flooding of a major electrical facility in Manhattan, and hospitals, which are most needed in times of crises were unusable and needed to be evacuated.

More recently winter storm Juno intensified with unexpected speed leaving a swath of the most densely populated part of our country from North Carolina to Boston with a hazardous layer of ice, under forty inches of snow and damage from wind gusts which approached seventy-five miles an hour. Communities on Long Island and New Jersey experienced coastal flooding from a combination of higher than normal high tides due to the coincidence of a full moon and the wind driven waves of seawater. In fact, some communities in New Jersey experienced higher tides then they even did during Superstorm Sandy.

The AIA was at the forefront of informing the citizenry and government officials of the dangers we face from future storms starting over a decade ago. The AIA had started to spread the message through a program for its members titled "Talk the Talk, Walk the Walk" encouraging sustainability in all areas.

GLOBAL WARMING AND POLLUTION

We are presently enjoying the financial benefits of crude oil around thirty dollars a barrel (as I am writing), yet we must remember fossil fuels by definition are a limited resource. Fossil fuels were created over many millions of years and even though we keep finding more as we enhance the technology of drilling there will come a time when we will be using up the reserves far faster than we are finding new sources and the supply will run out. There is no such thing as a perpetual motion machine or unlimited resources of naturally found substances from under the ground. Even though you may be among the limited number of people who do not believe global warming is at least partially caused by the burning of fossil fuels, you must acknowledge the fact that burning fossil fuels causes air pollution. Cleaner air is better for all of us and even more so for the children and the elderly.

In coordination with New York State's Energy Research and Development Authority (NYSERDA) the AIANY is arranging for training seminars throughout the state on various methods of attacking energy efficiency in buildings. These include passive house design, reducing a buildings carbon footprint and a healthier indoor environment.

RECYCLING AND LANDFILLS

Landfills throughout the country are closing as they are reaching capacity, as well as, effecting the environment by pollution seeping in to the land and water systems around them. Recycling, although taking a foothold here in the United States is far from where we have to be going forward. The AIA signed on to the idea of "Cradle to Cradle" as a philosophy of looking at building materials some time ago. The idea behind "Cradle to Cradle" was a response to a growing movement of "Cradle to Grave" for building materials which encouraged the design industry to consider what would come of building materials as buildings are renovated or demolished in the future. The AIA's take was it was too limiting. What we should be considering in selecting materials and what manufacturers should be considering as they develop products is how materials in buildings which are renovated or demolished can be used again, in some form, instead of simply heading for a landfill. This is a great start, however we have a long way to go in making our society sustainable.

BASIC HUMAN HEALTH

For our society to be truly sustainable we need to review and inspect the most basic elements of sustainability of life. That is the wholesome food chain and water resources we all need on a daily basis to sustain life and keep it healthy. According to some medical researchers, we may be entering a period of time in the United States when the children alive today may not live as long as the previous generation. We may be able to cure many childhood diseases, but cancers are on the rise. Our industrial farms are using an unprecedented quantity of insecticides and herbicides. Some ninety percent of wheat harvested in this country is done so by drenching the crop with sufficient herbicide to kill the plants. This is done so to merely make it easier to harvest with machinery than it would if the plants were still alive.

As a side effect of using pesticides, European scientists have concluded pesticides are partially to blame for honey bee hive collapse, otherwise known as Colony Collapse Disorder (CCD). Without honey bees the majority of plants cannot be pollinated which will result in crop collapse, resulting in a major interruption in the food supply chain.

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Also, some ninety percent of the corn crop in the United States is a GMO product. Unlike seedless oranges, where a single odd tree had the branch clippings grafted to other orange trees (a somewhat “natural” process), the GMO corn has had its genetic code altered to include a strand of DNA from an insecticide to repel insects. These techniques may increase yield, however it may be shortening our life span and quality of life.

We have many communities in our country that are literally running out of water. This has not been a constant problem here in the northeast part of the country as our droughts are few and far between. To have a truly sustainable community we must learn to conserve and reuse our fresh water supply. There are many current products and systems in the market which can be utilized for this purpose.

URBAN ENVIRONMENT

Today cities take up approximately only 2% of the surface of the earth yet they are populated by more than half of the earth's people. Cities produce approximately 70% of the world's GDP. Their population is responsible for 60% of the global energy consumption and the production of 70% of all greenhouse gases and 70% of global waste. The estimates are by the middle of this century will see the four out of five people living in cities. As we have learned in our county from the last big migration to cities during the Dust Bowl days of the Depression, this leads to a mental disconnect of the

population from nature and where our food comes from. The AIA is at the forefront of helping cities reconnect with nature through our Regional/Urban Design Assistance Team (R/UDAT) Program. Our cities need more parks and the parks should not only be areas of recreation and a natural oasis, they should become areas where we can become more connected to where food comes from. Some “green roofs” in New York City now grow vegetables, which are sold to local restaurants and grocery stores. This should be encouraged to permit the “Farm to Table” movement to become part of the fabric of the world's cities.

CONCLUSION

Throughout history, major advancements that improved society has always started at the grassroots level and worked up through to reach government. It is our responsibility as architects to lead our communities in areas of our built environment. We should make sustainability an all-encompassing philosophy, which includes protection from the ravages of Mother Nature's destructive events, energy conservation, renewable energy sources, recycling of natural resources and construction materials and the inclusion of the protection of our water and food chain. We need to become more aware of the latter and help educate the general public of this issue. This can all be accomplished with and through good design, without compromise, to the aesthetic nature of architecture and our built environment.