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# Human and Environmental Health Action Plan: Smart Strategies for a Sustainable Future

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## ABSTRACT

*Environmental sustainability is a 7<sup>th</sup> Millennium Development Goal established by the United Nations. Major cities and entire countries in the developed world are becoming increasingly aware of the importance of actions that can be taken for environmental sustainability. This paper applies the Smart Strategies approach to examining ways that individuals can take action to sustain both personal health and the environmental health of their community. Specific recommendations are provided that are adaptable for many conditions across national boundaries.*

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### Background

Sustainability of the environment is a 7<sup>th</sup> Millennium Development Goal advanced through the United Nations (UN, n.d.). However, to achieve this end the United Nations indicated a global call for the incorporation of sustainability development standards through national legislation and specific interventions, thus alleviating the constant threat of expiration of existing environmental resources; a decrease in biodiversity loss; a reduction by 50% of those populations that do not have sustainable access to safe drinking water and basic sanitation; and major improvement in the lives

of at least 100 million persons now living in slum surroundings (UN, n.d.). At the International Year of Sustainable Energy summit on January 16, 2012, UN representatives required governments, private businesses, and civil societies to promote energy access, to improve efficiency, to boost use of renewable resources, to decrease energy poverty, to facilitate sustainable economic growth and development, and to lessen the risks of climate change (UN News Center, n.d.). Year 2012 was declared the International Year of Energy for All (UN News Center, n.d.).

Furthermore, the *Healthy People 2020* environmental health objectives highlight six major aspects focusing on environmental health: outdoor air quality, surface and ground water quality, toxic substances and hazardous wastes, homes and communities, infrastructure and surveillance, and global environmental health. Whereas the United States has not yet seen national legislation aimed at reducing corporate carbon footprints and promoting sustainability, state and local governments across the country have begun to take bold steps in their effort to protect the environment and health of its citizens.

In the U.S., some states are adopting policies and promoting voluntary campaigns aimed at reducing energy usage in commercial buildings. The result is a step in the direction of greater efficiency, lower energy costs and fewer greenhouse gas emissions.

A case in point is New York City, which recently passed NYC Local Law 84 as part of the Greener, Greater Buildings Plan, requiring both public and private buildings in the city to track energy and water consumption using EPA's Portfolio Manager. Starting in 2010, city buildings larger than 10,000 square feet were required to benchmark energy and water usage, while private buildings larger than 50,000 square feet were required to follow suit in the beginning of 2011. These performance metrics will be published and made available to the public via an accessible online database, giving complete transparency to those interested in choosing space based on the environmentally friendly nature of the building (New York City, 2010).

Similarly, the Austin, Texas Energy Conservation Audit and Disclosure Ordinance requires that as of June 1, 2011, eligible commercial facilities gauge their energy performance using a rating system approved by the Austin Electricity Utility. Utilizing Energy Star, compiled information is disclosed to prospective buyers before the

time of sale, thereby encouraging energy efficiency and highlighting its importance and the inevitability of energy efficiency as a factor in business decisions (City of Austin, 2011).

The city of San Francisco amended the San Francisco Environment Code with the Existing Commercial Buildings Energy Performance Ordinance in April 2011. Owners of nonresidential buildings are now required to file Annual Energy Benchmark summaries using EPA's Portfolio Manager (City of San Francisco, 2011).

Although it is not at the federal level yet, we are beginning to see different parts of the country take action toward demanding greater environmental awareness from big business. These moves are certainly crucial to protect the environment on a larger scale, but they are also more critical to corporate profitability than many companies tend to realize. U.S. companies such as Nike, Target, Cisco, Campbell's Soup, Hilton, TXU Energy, and Chrysler have reported saving tens of millions of dollars by adopting renewable energy, energy efficiency, and recycling schemes.

Cities such as Evanston, Illinois and Houston, Texas are recognizing the need to reduce greenhouse gas emissions in a concerted effort to fight global warming and climate change. Some have launched campaigns and incentive programs to chal-

lenge business owners to achieve a better understanding of their energy and water usage (U.S. Conference of Mayors, 2011).

Other programs, such as the C40 and its partnership with the Clinton Climate Initiative, have further solidified the importance of tackling this important topic. Chicago, Houston, Los Angeles, New York, and Philadelphia are among the major U.S. cities included as participants that acknowledge the social, economic, and fiscal implications of the long-term effects of global warming. As a home to nearly half of the world's population and responsible for the consumption of two-thirds of the world's energy and 70 % of CO<sub>2</sub> emissions, participants in C40 have recognized the need to be part of the solution (C40 Cities, 2012).

While we await proper attention to sustainability on a federal level, these regions will lead the way and make it necessary for other key areas of the U.S. to take note and join the effort. As sustainability proves profitable for businesses, it is also a necessary endeavor for the sake of the environment and for the health of the citizens. With evidence of climate change, including increased global average temperatures, rising sea levels, and decreased snow coverage in the Northern Hemisphere, it is imperative that the issue is addressed globally. Only together will we see the impact

on the environment that we so desperately need. And, along the way, businesses will become more profitable and more likely to succeed in long term.

### **Determining the Health of a Community**

The health of a community involves the environmental quality of the community and the physical and mental health of its residents. An efficient community starts with healthy residents. Take a look at your family and yourself. Are you healthy? Where do you go if you develop medical problems? Do you follow proper nutritional guidelines? Are you aware of environmental hazards? and, What health issues affect family members and what must each generation deal with in regards to specific issues?

### **Smart Strategies for a Sustainable Future**

Smart Strategies (U.S. EPA, 2011a) are organized around a 5-step planning approach. Each planning step results in a tangible outcome:

- Where are we now?
- Where are we going?
- Where do we want to be?
- How do we get there?
- Let's go!

### **Where Are We Now?**

Communities need to "take stock" of their indigenous assets (social, economic, and environmental) by as-

sessing various local conditions. Developing a community profile will reveal existing conditions and identify local characteristics such as geographic, natural resource, population, political, civic, and environmental components. Identifying environmental conditions, such as water quality, air quality, hazardous waste sites, and other potential sources of pollution are critical tasks.

An important part of determining local needs is to conduct a community assessment. A Community assessment will result in:

- A delineation of planning area boundaries.
- An identification of community values.
- An inventory of natural and human-made features including sensitive areas and opportunities.
- An evaluation of economic conditions in your community.
- An evaluation of public facility and infrastructure capacity and effectiveness (e.g., such as with wastewater treatment facilities).
- Linkages among social, economic and environmental issues.
- A way to compare your community with other communities.

If you have answered the question "Where are we now?" you have prepared a community assessment and

have a good understanding of your community's current conditions. You also have identified problem areas and possibly ranked those areas according to risk to the environment, quality of life, and economic vitality.

### **Where Are We Going?**

Answering "Where are we going?" will help your community predict, based on current trends and activities, the direction you are headed. It allows community members to visualize their future if nothing is done to intervene. What can you expect if current patterns of land development, population change, natural resource consumption, and commercial and industrial activities continue? Are these trends sustainable?

Your community will be affected by regional or even global forces. Only by wise planning can you respond to these forces in a positive way. You need to develop your community's probable future scenarios.

### **Where Do We Want To Be?**

This is the visioning process which focuses on where a community wants to be within a specified timeframe. Visioning empowers the community to move beyond the probable future scenarios. Visioning can lead to the desired future of a healthy environment, a

strong economy, and a high quality of life.

Community participation is the key. Bringing people together of diverse backgrounds allows the vision to capture the values and interests of a broad constituency. Brainstorming ideas from the entire community results in a synergistic effect that can bring out a myriad of ideas that reflect the values and interests of the community as a whole.

The visioning process will result in a Vision Statement with one or more alternative "futures" proposed. These futures should represent variations on a theme aimed at achieving sustainable solutions for the environment, the economy, and sand overall social well-being. Once a vision is created, the community can work towards realizing its goals in an effective and deliberate way.

### How Do We Get There?

Action plans translate the visions of the future into action oriented items. Whereas there is no "cookbook" approach to action planning, an action plan should provide goals and objectives, identify issues and concerns, list recommended actions, and assign responsibility for the work to be done.

Timeframes should be set for priority actions. The action plan should include estimated financial costs and resources needed for implementation.

These actions are necessary to put you on the path of realizing your community's vision for its future – a healthy environment, a strong economy, and a high quality of life.

### Let's Go!

It is now, during implementation, when long-term commitment and resources will be the most needed. In Let's Go! you need to select a variety of tools that can help implement your plans. Some tools require a high level of technical expertise, others can be implemented by high school students and interested volunteers. Because a sustainable community reaches out to the diverse community at-large, bringing people together with a range of expertise, knowledge, and skills, you need to select tools that enhance stakeholder participation. You need to determine *if this project or these tools help us to achieve our future vision?* Some tools include:

- Information access and management tools such as "how to" information on monitoring, databases, and hot-line numbers.
- "Action-oriented" tools such as pollution prevention guides.
- Time resources - advocacy, program staff, political and public support are prerequisites for success.
- Committed people and opportunity are necessary. Community involvement continues to be

an important and integral part during the implementation phase.

## The Human Health Action Plan

### Goals and Objectives

The goal is for you to develop a human health profile for your family and yourself. Develop awareness of generational gaps. Have a family discussion about health changes and stages. Become aware of changes that maybe or are occurring in your life and have family members become familiar with their own health. Know what to expect and consult with your doctor. Become aware of your environmental health. Assess the health condition of your family members. Develop an exercise plan that can be done individually or as a family. Exercising daily will increase your energy level and you will become more active within your community. Put a focus on nutrition. Also, become familiar with health issues of the community and self.

Now that you have established your goals and are committed to living a healthier life, you can look at ways in which the entire community can be involved by accessing [http://www.epa.gov/greenkit/pdfs/Indicators\\_Linkages.pdf](http://www.epa.gov/greenkit/pdfs/Indicators_Linkages.pdf) (U.S. EPA, 2011b)

Recommendations from the Human Health Action Plan include participating in charity walks, creating sports

leagues for children and adults, creating and repairing bicycle and walking paths, encouraging alternative transportation methods through fitness: bike, walk, run, skate to work or school, etc., sponsoring theme weeks- alternative energy week, fitness week, eat to a better health week, etc., talking to your local schools- encourage physical education teachers and other teachers to stress the importance of health and nutrition, developing a field day for elementary schools where children spend the day participating in aerobic activities. Combine this with a health fair and extend it to high school students. These are just a few ideas to get you started toward a healthier you and a healthier community.

### The Environmental Health Action Plan

Taking steps to reduce and prevent health risks from environmental factors will greatly increase the health of your family. A valuable source of information can be found at the National Association for County and City Health Officials Web site ([naccho.org](http://naccho.org)) (NACCHO, 2012).

Accessing the URL [http://www.epa.gov/greenkit/pdfs/Indicators\\_Linkages.pdf](http://www.epa.gov/greenkit/pdfs/Indicators_Linkages.pdf) (U.S. EPA 2011c) enables you to find resources that will help you to reduce your risk of exposure to a variety of environmental factors.

### Goals and Objectives

The goal here is for you to develop an understanding of environmental factors and how they relate to health. These include learning about health hazards associated with common household cleaners and paints and becoming aware of air quality issues. From this you will gain the knowledge to reduce your risk of exposure to these factors. Your objective here is to reduce the risk of exposure to environmental health factors. There are some important environmental health risks on which you need to focus.

**Radon** is a colorless and odorless gas which enters the home through dirt floors, cracks in the walls and floors, floor drains and sumps. The effects from this gas may include lung cancer. Perform a radon test within your home to determine if levels are safe. Take appropriate measures depending on the results.

**Lead** from paint, dust, and soil can be dangerous if not managed properly. Become aware of materials in your house that may contain lead. If you are renting or buying a home obtain information pertaining to the amount of lead that may be in the building. If you suspect that your house may contain lead, have your children tested.

In addition to radon and lead, other indoor pollutants such as **carbon monoxide** and **other harmful chemi-**

**icals** can cause respiratory illness and other medical problems. Survey the air in your home, place of work and schools. Determine if the quality of the air is healthy and acceptable.

**Air quality** includes dangers such as mobile air emissions, stack emissions, and other pollutants that are released into the air. Become familiar with pollutants in your community.

**Household toxins** and **household hazardous wastes** are those wastes produced in our households that are hazardous in nature, but are not regulated as hazardous waste, under federal and state laws. Identify those products in your home that may be hazardous and dispose of them properly. Use community-sponsored waste sites and try to purchase and use environmentally friendly products.

Environmental effects from **ozone** include skin cancer and other skin diseases. Become familiar with methods to protect you and your family from ultra-violet (UV) light exposure.

### Practical Examples of Recommendations for Planning at the Community Level

#### Radon

- Provide radon information for community use.
- Sponsor community radon education courses.

- Promote national radon action week within the community.
- Reduce level if the radon level in your home is 4 picocuries (level of radiation) per liter (pCi/L) or higher.
- Radon kits can be found at hardware stores, home improvement stores, and other similar retail markets.

### Lead

- Create educational school programs based on the dangers of lead exposure.
- Promote a lead education campaign.

### Indoor Air Quality

- Eliminate harmful sources from homes, schools, and businesses.
- Have proper ventilation and be sure to maintain woodstoves.
- Follow weather proofing guidelines for schools, homes, and businesses to ensure proper ventilation.

### Air Quality

- Encourage alternative transportation methods.
- Encourage public transportation use and car pooling.
- Properly maintain automobiles to reduce CO<sub>2</sub> emissions.
- Have regular emissions tests done on automobiles.

### Household Hazardous Wastes

- Sponsor a community household hazardous waste clean out day.
- Provide literature about hazardous chemicals that may be used at home.
- Never dump hazardous products down drains, the toilet, or near flowing water, ponds, or lakes.
- Use natural and less-toxic household products whenever possible.

### Ozone

- Follow skin care guidelines and protect yourself and your family from harmful UV rays.
- Encourage the use of sun tan lotion.
- Promote indoor community activities on high ozone days.
- Include ozone education within schools.
- Refill gas tanks at night and do not "top off" tanks.
- Mow lawns early in the morning.
- Advocate for public transportation and car pooling.

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