

Chapter written by Yeatts,  
Cooksey and Messenger:

An Historical Overview of the  
Environment and Sustainable  
Communities

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Introduction to Sustainable  
Community Development

What do we mean by  
"sustainable community  
development?"

2

How is Sustainable  
Community Development related to  
Environmental Sociology?

Environmental Sociology includes a  
variety of areas including  
(but not limited too):

- climate change and its effects,
- biodiversity issues,
- Air and water pollution,  
causes and solutions
- Strategies for reducing global  
warming
- Sustainable Community Development

3

What are the three "legs" (or  
major components) that  
contribute to sustainable  
community development  
(the 3 E's)?

Environment

Economics

Social/Political Conditions  
(social Equity)

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#### SUSTAINABLE COMMUNITY

Sustainable communities embody the  
principles of sustainable development.  
They:

\*balance and integrate the social,  
economic and environmental  
components of their community .

\*meet the needs of existing and future  
generations.

\*respect the needs of other  
communities in the wider region or  
internationally also to make their  
communities sustainable.



SUSTAINABLE COMMUNITY DEVELOPMENT

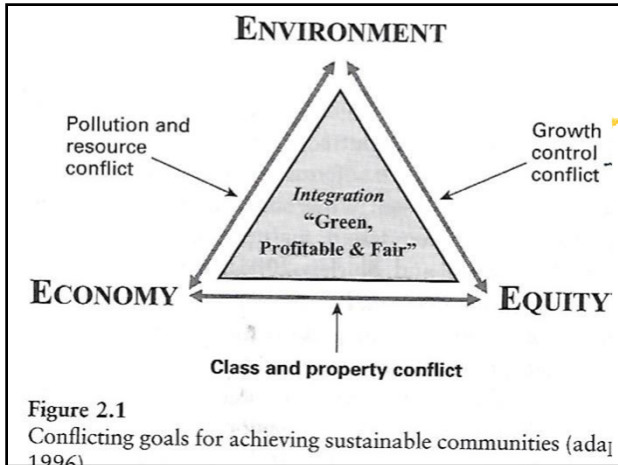
Sem. III, 2012-14, Rachana Sansad's Institute of Urban & Regional Planning, Mumbai.

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The three components have  
historically conflicted or  
competed with one another.  
What are examples (show next  
slide for help)?

(the three components:  
Environment, Economics, social  
Equity)

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While it is easy to see the conflict between industry and environmentalist, What about conflicts between environmentalists and supporters of social equity?

- environmentalist wanted more open spaces while social equity is more concerned about affordable housing and avoiding "gentrification."  
(What is gentrification?)
- Environmentalists were willing to shut down polluting industries; social equity is more concerned about creating jobs

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An examination of the history of the environmental movement can help us see how SCD emerged.

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From an historical perspective what were/are some of the broader social beliefs and developments that were allowing environmental pollution to occur?

- Industrial revolution combined with:
- Capitalism
- American values, e.g., materialism, individualism
- Population growth
- Urban development
- The automobile and energy use
- Ignorance

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When did the environmental movement begin?  
And  
Who is Rachel Carson?



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Industrialization and urbanization continued to grow through the 1900s until the environment got so polluted, in the 1960s, there was the beginning of a national movement to protect the environment.



June 1962: Rachel Carson's Silent Spring was published. Acclaimed as the catalyst of the **environmental movement**, Silent Spring condemned the overuse of pesticides (DDT).

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What were some of the environmental changes that were a growing concern among Americans?

- Air pollution
- Water pollution
- Chemical pollutants
- Endangered habitats
- Natural resource base disappearing

Examples

- One of the Great Lakes had little life
- Chesapeake Bay crabs uneatable

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How did cities and states react to the pollution problem?

Did they begin passing strict environmental protections?

In general, cities and states had difficulty passing regulations due to a lack of will to upset industry leaders and scare away businesses and their tax revenue. And the prospect of residents losing jobs from industry shutdown.

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Among those who were in favor of environmental protections, there was not unanimous agreement about how to achieve this.

What would you guess were some of the controversies surrounding the environmental movement?

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1. The balance between the environment and the economy.

How much should the businesses of a community "give up" for the sake of the environment and people and to what extent should the environment and people be expected to "suffer" to allow for a thriving economy.

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2. Changes made in one community could affect neighboring communities negatively.

Some communities didn't care as long as their own community was protected.

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3. Environmental pollution got so bad the federal government stepped in, and with it people questioned its amount of authority. This began the **first** of three epochs or eras or time-frames addressing environmental concerns in the U.S.

What would you guess the federal government did to (1) prevent further pollution and (2) repair existing pollution problems (e.g., polluted rivers and lakes)

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3a. The Environmental Protection Agency (EPA) was created in 1970 to address environmental issues primarily through rules and regulations.

3b. At this time, "command and control" regulations were passed.

That is, laws (commands) were put in place to prevent (or control) businesses and others from damaging the environment.

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One example: The catalytic converter was required by law in 1975

A catalytic converter is an exhaust emission control device attached to motor vehicles that converts toxic gases and pollutants from the internal combustion engine into less-toxic pollutants.

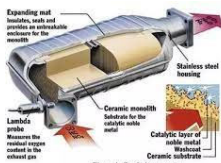


Figure 1. Catalytic converter. From: Davis Recycling Inc.

Since 1975, vehicles have needed a catalytic converter to meet **federally mandated emission standards**. 2009 CA required the more effective A CARB-compliant catalytic converter and many states have followed.

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4. (controversies surrounding the environmental movement) While federal regulations have been effective, they have also created problems.

Who was affected by lots of regulations?  
and  
What problems would you guess they created?

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4a. High cost to business and governmental agencies

4b. Tends to focus on punishment of businesses rather than encouraging environmental protections



4c. Rules/regulations have tended to be added in a sporadic, unorganized way, i.e., whenever Congress can agree, resulting in regulations being cumbersome, unorganized and sometimes complex. These include statutes that are legally enforceable (regulations) as well as directives that may not be legally binding (rules)

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5. Regulations affected innovation both negatively and positively.

What are some examples of negative and positive effects on innovation?

Negatively: cost of adhering to regulations reduces \$ that could have been spent for innovation

Positively: regulations can encourage innovation to look for ways to improve and protect the environment

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6. In the push to pass laws to protect the environment, there has been a neglect to consider more comprehensive issues and solutions that consider business, environment, and social concerns, simultaneously.

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Federal agencies have often been unable to address problems in a more comprehensive way due to their "silo" type of organization (e.g. Environmental Protection Agency only considers environmental issues)

But to solve the problem requires a more comprehensive approach, for example, collaboration between EPA and the Department of Transportation and Department of National Parks

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Or collaboration between regional water agencies, city governments, and the EPA



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The command and control approach of the EPA was viewed as "bullying" by businesses and industry.

As a result, what would you guess was the response of businesses and industry?

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Rather than joining the general concern for the environment,

The Backlash against command and control resulted in organizations doing only what was required, that is, the least they could get away with legally.

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Volkswagen attempts to cheat the EPA

- Volkswagen intentionally programmed diesel engines to activate their emissions controls only during laboratory emissions testing, while they emitted up to 40 times more NO<sub>x</sub> in real-world driving.

WHY the deception?

A group of the company's engineers decided to cheat on emissions tests in 2005 because they couldn't find a technical solution within the EPA's time frame and company's budget to build diesel engines that would meet U.S. emissions standards.

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Era 2 of the environmental movement:  
EPA attempted to remove the friction  
between it and business.

There was a refocus of the EPA  
toward conciliation between (1) EPA  
and (2) industry and (3) those  
concerned for social equity

Characteristics of Era 2:

1. Slowed down the creation of regulations, though has continued to add regulations regarding toxic materials and hazardous waste

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2. Looked for ways to obtain  
"buy-in" from those industries  
that might or did pollute (i.e.,  
gain their willingness to reduce  
pollution)

What could be done to gain  
buy-in?

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1. Educate managers and others on the importance of protecting the environment
2. Provide incentives/rewards for protecting the environment
3. "Advertising" those organizations and businesses that made an effort to protect the environment
4. Establish "certificates" of success
5. Provide financial rewards for those intentionally protecting the environment
6. Provide less oversight to those organizations doing a good job protecting the environment

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Era 2 arose not just because of a  
backlash from industry but also  
because the environmental problem  
was greater than the Federal and  
State governments could handle.

Why would you guess the government  
was unable to handle the problem with  
regulations alone?

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- Too costly to inspect all the many industries and organizations
- Not enough EPA staff to oversee/monitor all the many organizations/industries
- Organizations and industry could find ways to cheat the system unless they wanted to protect the environment
- The lack of buy-in reduced the EPA's effectiveness.

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While Era 2 encouraged collaboration, there was still hesitancy from some, such as between cities.

Why might there be hesitancy for one city to work with another? Examples?

Water concerns.

Transportation costs/sharing between cities.

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Era 3 of the environmental movement emerged as business, government, and social advocates began to see the advantages of collaborating with each other.

The concept of sustainable community development emerged.

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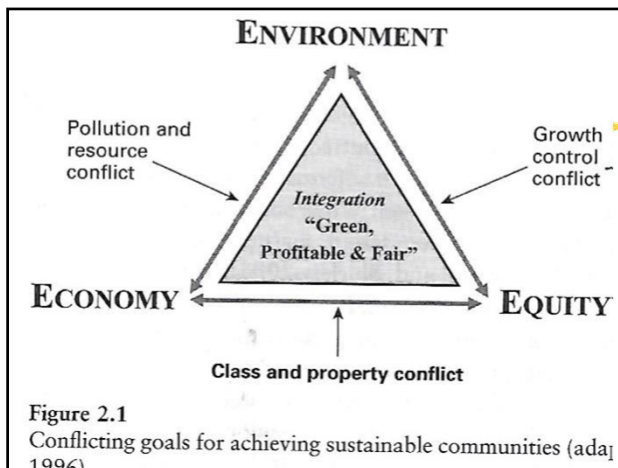


Figure 2.1  
Conflicting goals for achieving sustainable communities (ada, 1996)

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### Era 3 characteristics of the environmental movement

(1.) A more comprehensive view that considered not only how to protect the environment but doing so without regulating industries out of business.

That is, recognizing the importance of balancing the environment, economic, and social dimensions of a community.

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Within the city, there was a need for collaboration. Who would you guess are some of the groups and organizations that were involved in collaboration to protect the environment within the city?

- Transportation planners
- Park and Rec./regional agencies
- Land-use and city planners
- Elected municipal officials
- Neighborhood activists
- Downtown business leaders
- Environmental groups
- Industry managers

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One of the first cities to create a Department of Sustainable Community Development was?

Seattle

They brought together industry members, environmentalist, and social activists to come to agreements about how to protect the environment.

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Seattle developed "indicators" of successful SCD. Why would they create SCD indicators?

SCD indicators allow them to measure how successful their SCD programs were at protecting the environment.

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(characteristics of Era 3 continued):

2. A push to get the general public to think more about the environment and how they can personally protect it.



What are we talking about here?

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Can the individual behaviors of people make a difference when considering the extent or size of the pollution and global warming problems?

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2a. Educate people to recognize ways that the environment is being damaged but goes unrecognized (e.g., energy used to produce a product—the product when used may save energy but it may require a great deal of energy to make the product and that may negate its energy savings)

2b. Helping people realize how they are contributing to the environmental problem.

Has the EPA and others done a good job of this?

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Characteristics of Epoch 3:  
(continued)

3. Studies to better understand why the public, builders, and others are not using energy-efficient technologies and what can be done to overcome the barriers that exist.

What are examples of:

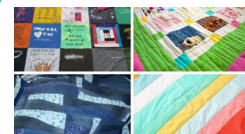
- (a) energy-efficient technologies and
- (b) practices that might be used by the public or general contractors who build buildings?

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Examples of Energy-Efficient Technologies:

- Programmable thermostats
- Energy-efficient windows
- Solar panels
- Electric cars
- Home insulation
- Recycling
- Using recyclable materials
- Use of rain water



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What are LEED certified buildings and how are they related to SCD strategies?

Leadership in Energy and Environmental Design

To encourage and reward environmentally conscious practices rather than trying to "command and control"

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What factors are preventing people from using energy-efficient technologies?



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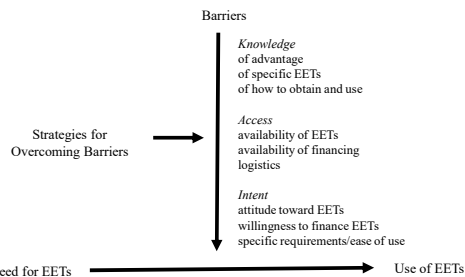


Figure 2: Conceptual Framework Displaying Barriers to the Use of Energy Efficient Technologies (EETs) Within Buildings

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(characteristics of Epoch 3)  
4. Recognizing that the EPA is not large enough to "command and control" all the organizations that pollute.

How large is the EPA? Employees? Budget?

Employees: 15,739 (2023)  
Annual budget: roughly \$9.16 billion (2024)

Regional Offices: 10

How much information is needed by the EPA to "command and control"?

More than they can afford to collect

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5. Realization that most polluting organizations are interested in protecting the environment if given the chance, i.e., not "forced" but allowed to find their own solutions (how is this related to innovation?).

6. Realization that the solution to the environmental problems require the consideration of not only the environment but also economic and social factors

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What is "smart growth"?

- A movement stressing urban development (e.g., removal of unsafe buildings, housing closer to jobs, etc.)
- Smart growth is an overall approach of development and conservation strategies that can help protect our health and natural environment and make our communities more attractive, economically stronger, socially diverse, and resilient to climate change

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### What are its advantages?

- A movement stressing urban development (e.g., removal of unsafe buildings, etc.)
- Revitalizing sagging local economies
- Managing urban growth
- Balancing transportation, housing, jobs, environmental quality, and social services

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### Dis-advantages of "smart growth"?

- Focus on urban renewal where gentrification takes place  
(what is gentrification?)
- Not necessarily what people want, such as high density urban areas and reducing suburbs to avoid long drives to work

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### What are ecological footprints?

- A measure of the "load" placed on the biosphere by a given population or organization.
- Example: a community's combined population and per capita consumption of resources (plus associated waste production)
- Human impacts in terms of the land and water areas appropriated for energy and resource consumption and for waste disposal

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Consider examination of Great Lakes, Wisconsin Basin, LA

Consider environment research in China

Sustainable Community chapters and Neighborhood chapters

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Sackett v. EPA: How One Couple's Battle Against the Feds Might Protect Your Land (7:38)

<https://www.youtube.com/watch?v=40iHXAOjJ3U>

The Reasoning and Impact of the Supreme Court's Ruling in Sackett v. EPA (first 3 minutes)

<https://www.youtube.com/watch?v=UMOSEoUy1pI>

Why most Americans support the EPA (4:07)

<https://www.youtube.com/watch?v=G2Nmhcxf2k>

How Obama's EPA Nearly Bankrupted John Duarte's Farm (3:16)

<https://www.youtube.com/watch?v=qlBX6UoBfx8>

War on the EPA (3:00)

<https://www.youtube.com/watch?v=JJ1P9IcTGVY>

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Plastic Wars (full documentary) | (18 min)

<https://www.youtube.com/watch?v=-dk3NOEgX7o>

Creating Sustainable Cities (7:06)

<https://www.youtube.com/watch?v=ViJIJh-BNq8>

Why most Americans support the EPA (4:07)

<https://www.youtube.com/watch?v=G2Nmhcxf2k>


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What Is the Most Sustainable City in the World?(2020: 7:48)  
[https://www.youtube.com/watch?v=fsWrOLfM\\_uQ](https://www.youtube.com/watch?v=fsWrOLfM_uQ)

5 Most Polluted Cities on Earth  
 (start at 5:00; goes until 11:05—6 minutes total)  
<https://www.youtube.com/watch?v=69jwIw4JeVk>

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Innovating to zero! | Bill Gates, 2010  
 (18:00/29:32)  
<https://www.youtube.com/watch?v=JaF-fq2Zn7I>

Bill Gates' Terrapower and the Natrium Reactor | Rock Logic | 2022 (first - 3:10mins)  
[https://www.google.com/search?client=firefox-b-1-e&q=rocklogic+and+terra#fpstate=ive&vld=cid:d6a53627\\_vid:3mZIP060zw](https://www.google.com/search?client=firefox-b-1-e&q=rocklogic+and+terra#fpstate=ive&vld=cid:d6a53627_vid:3mZIP060zw)

The Future Of Nuclear Power - Holtec SMR 160 (8 min)  
<https://www.youtube.com/watch?v=bwSHEPovxPc>

Bill Gates on How we're doing on the path to zero emissions, 2022 (3 min)  
<https://www.youtube.com/watch?v=ipkPcrNsCv8>


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Global Warming  
 By Al Gore  
 (show 17minutes; next time show rest ~8 mins) (2024  
 162 million tons greenhouse gases per day)  
<https://www.youtube.com/watch?v=gVfgkFaswn4>

Study of toxins in lakes that may cause alzheimers (3 mins)  
<https://www.unh.edu/unhtoday/2014/07/are-toxins-escaping-our-lakes>

Robert J. Sampson: Neighborhood Effects and the City\_(start at 8:00 mins)  
<https://www.youtube.com/watch?v=rnKLIvyFOzc>

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What Is the Most Sustainable City in the World?(2020: 7:48)  
[https://www.youtube.com/watch?v=fsWrOLfM\\_uQ](https://www.youtube.com/watch?v=fsWrOLfM_uQ)

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