

DEFINING AND MEASURING SUSTAINABILITY

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Defining Sustainability – The Beginning: Gro Brundtland 1987

“Environment and development are not separate challenges.

Development cannot subsist on a deteriorating environmental resource base; the environment cannot be protected when growth leaves out of account the costs of environmental destruction.

These problems cannot be treated separately by fragmented institutions and policies. They are linked in a complex system of cause and effect.”

Since 1987: What is Sustainability / Sustainable Development?

- More than 500 definitions in the literature.
- Most widely accepted is that of Gro Brundtland [1987]: *Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

Other definitions:

Inter generational

- OECD: *Integrating the economic, social and environmental objectives of society in order to maximize human well-being in the present without compromising the ability of future generations to meet their needs*
- US President's Council on Sustainable Development: *Sustainable Development is economic growth that will benefit present and future generations without detrimentally affecting the resources or biological systems of the planet.*

Viederman/Steve Hackett Ecological Economics: Five Capitals

- Sustainability ... a community's preservation and prudent use of natural, human-made, human, social and cultural capital in order to generate a sustained flow of benefits that support the "3 pillars" of economic vitality, ecological integrity and democratic process.

Chief Seattle: The Web of Life

Man as Part of Nature

- Chief Seattle – This we know: **the earth does not belong to man, man belongs to the earth.** Man did not weave the web of life, he is merely a strand in it. **Whatever he does to the web, he does to himself.**

World Business Council for Sustainable Development

- The WBCSD has noted that while the classic definition of sustainable development [Brundtland] expresses the idea, it has proven hard to put into practice and communicate to the general public.
- Sustainable development is a holistic concept that requires integration of **economic growth, social equity** and **environmental management**.
- Sustainable development aims to make global society not just better off, but better all together.

The 3 E's and the 3 P's

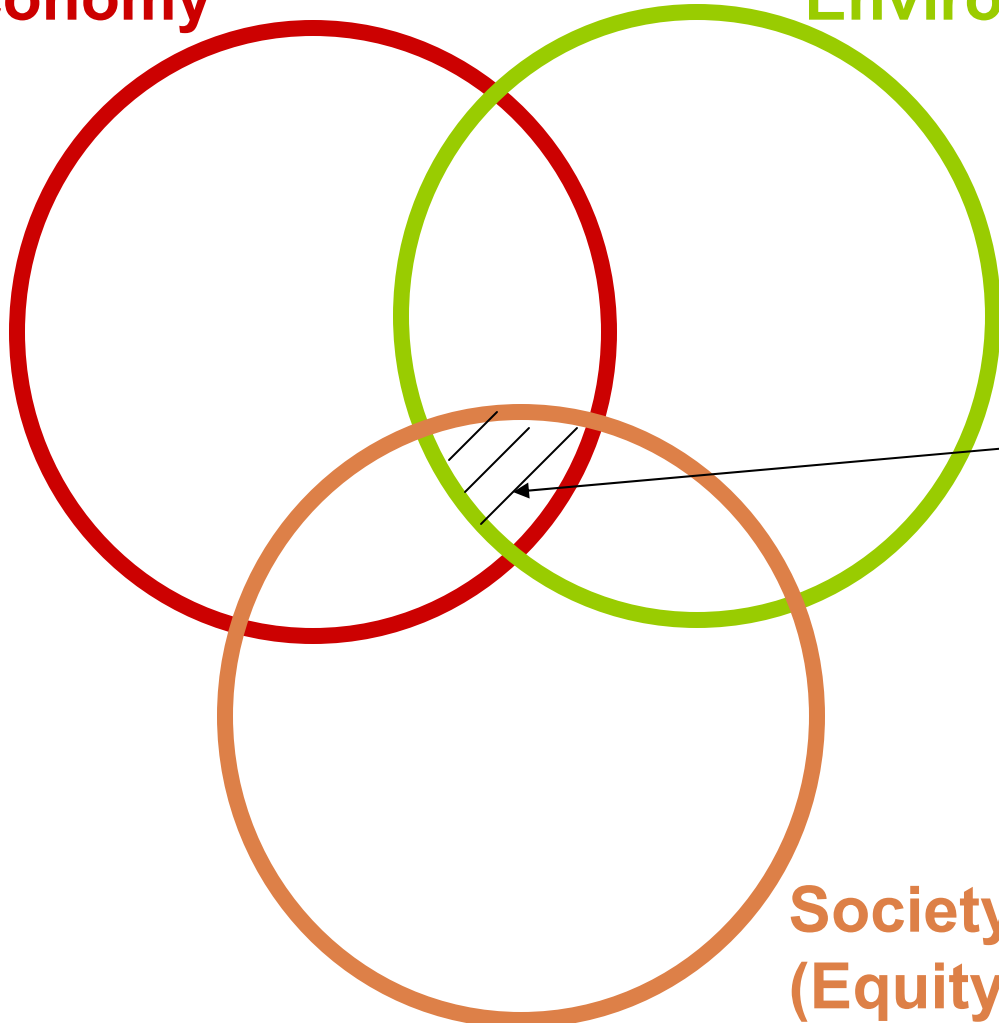
- Three E's (also ~ Triple Bottom Line)
 - ▣ Economic
 - ▣ Environmental
 - ▣ Equity (Social)

- Three P's [EPA's P3]
 - ▣ People
 - ▣ Prosperity
 - ▣ Planet

The Ideal View of Sustainability

Economy

Environment



The “sweet spot” that intersects all three circles is:
sustainability

**Society
(Equity)**

Millennium Development Goals

□ United Nations Goals for 2015

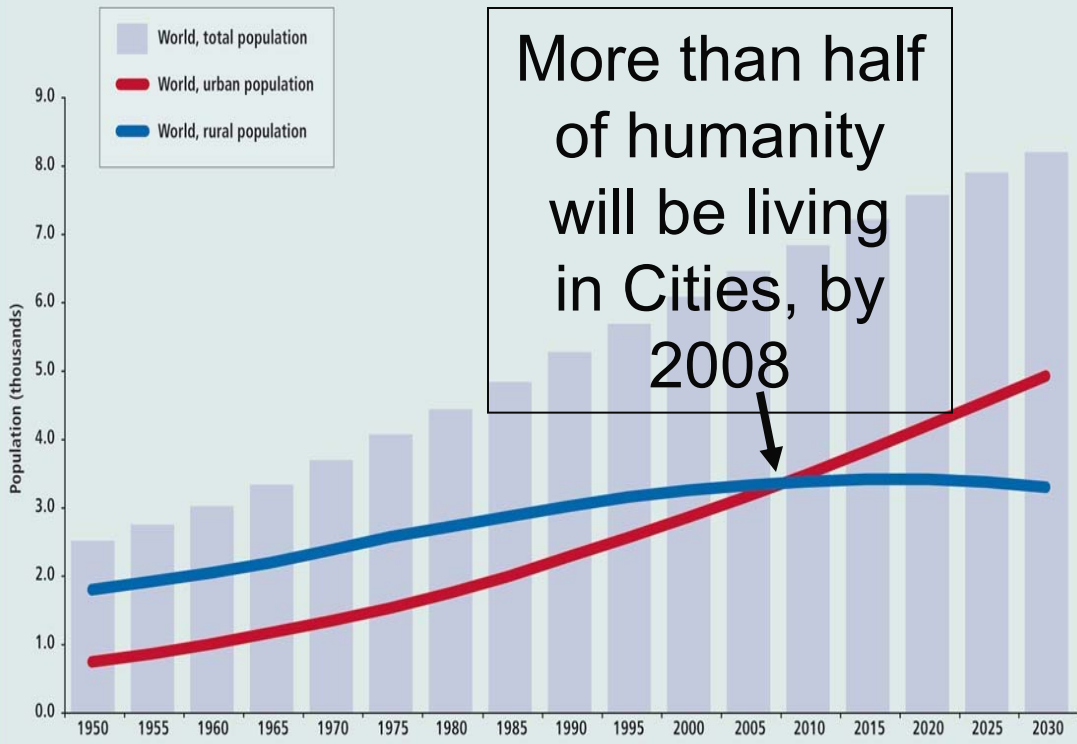
- Eradicate Extreme Hunger and Poverty → Economic
- Achieve Universal Primary Education
- Promote Gender Equality and Empower Women → Equity
- Reduce Child Mortality
- Improve Maternal Health
- Combat HIV/AIDS, malaria, and other diseases → Equity
- Ensure Environmental Sustainability → Environment
- Develop a Global Partnership for Development

Local Agenda 21 (LA21) for Towns and Cities

- LA 21: Leading up to the 1992 Rio Earth Summit, ICLEI developed and proposed the concept of LA21, the global action plan for sustainable development for cities and communities.
 - ▣ This initiative has led to the single largest movement of local governments toward a common goal. More than 6,400 local governments in 113 countries worldwide have responded
- *Why local action at the City-Scale?*
 - ▣ Local activities suited to local context.
 - ▣ Urban population greater than rural, for first time in our history
 - ▣ Population of the forty largest cities is more than many nations (C40 Initiative): <http://www.c40cities.org/climatechange.jsp>

Why Urban?

The urban and rural population of the world, 1950-2030



[UN, 2003]

Sustainability Definitions in 33 US Cities (Warner 2002)

- In a survey of cities (who at the city?), 93 percent regarded a healthy economy and 79 percent regarded a healthy environment as extremely and very important, while 63 percent mentioned equity as important.

- Web Review

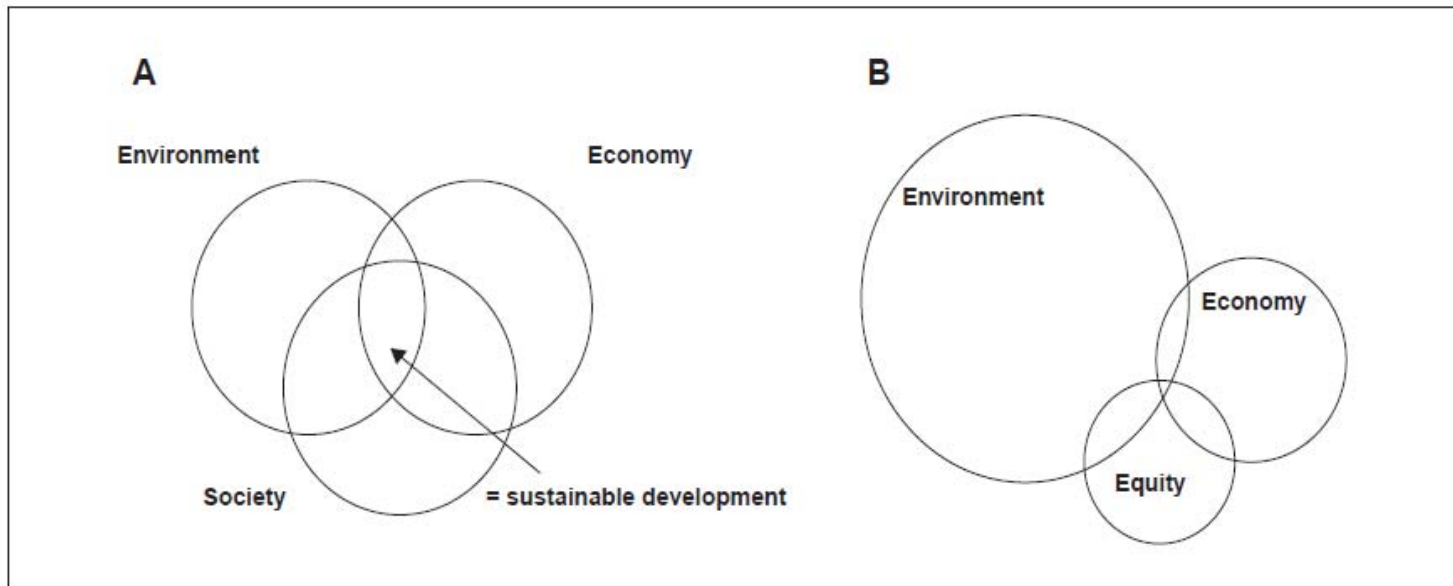


Figure 1. Reinterpreting Venn Diagram Model of Sustainable Development.

How many cities are doing this?

- More than 1 000 cities globally
- More than 800 cities in the US have launched sustainability plans
 - ▣ Mumbai, India recently became the 1 000-th city

A Five Step Process in LA21

- Convene multi-stakeholder group from the community
- Identify sustainability priorities and set goals
- Measure baselines (relevant to these goals)
 - Finite Resources – Water, Energy, Land, Water/Air Quality (Measurable footprints for sustainable energy, water use, emissions, etc.)
 - Other: Poverty Alleviation, Health
- Prioritize Actions for implementation
- Measure action outcomes and reevaluate