

# Urban Ecological Systems

The services of novel ecosystems

M1: Identifying our human induced environmental problems

## What are the socio-ecological problems of Cities?

**Step 1:** Begin with your intuition and frame a “hunch” or two about socio-ecological problems in the built environment. Use the class materials and the web to examine the importance and truth of your hunch. Let this lead you to explore why we should have nature in cities by defining the socio-environmental problems related to cities and urbanization by identifying the pressing socio-environmental problems facing our world.

### Just a few topics for consideration

Overpopulation  
Freshwater scarcity  
Water pollution  
Global warming/climate change  
Loss of biological diversity  
Access to food or nutrition  
Production of food  
Human physical health  
Greenhouse Gas Emissions  
Human psychological health  
Desertification

**Step 2:** Write each topic on sticky note (Large enough to read from a 6' distance), bring separate information to support and explain your position in class, determine relatedness of topical categories. Place sticky notes under categories and discuss.

Be prepared to discuss these questions: Why do you consider this a socio-environmental problem? Who says so? How is that determined? How do we as designers contribute to this problem?

Supporting your “Hunch” with facts and stories. Use organizations and agency information. Give rankings and be able to verbally cite studies and reports.

- What are the rankings for the world, the country, Ohio and Cleveland? (global to local scales)
- What are the units of measure for these problems? (What are the parameters?)  
*FOR EXAMPLE: water quality can be measured by nutrients in the water, listed impaired stream lengths in miles, beach closures, warnings per year. Biodiversity can be measured by area (sq miles) of habitat loss, or species listed as of concern, threatened, or endangered. Use conventional parameters.*
- How do we as designers contribute to this problematic condition? Are we ignoring it?
- Advice : Be prepared to use a combination of quick take-away facts and stories that dig deeper and contextualize *For example. “Ohio is ranked fifth in the US in (Stream habitat loss) by (US wildlife fund) ” And “land area from the (Ohio Department of Natural Resources) shows a decline*

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*in (stream amphibians and other stream organisms) and "human health consequences are created by this can be... people experience less stress when living near urban green spaces." (a continuing decline of water quality and increase frequency of dangers like toxic algae) "*

**Tools:** pencil and paper

**Organization:** Individuals

**Tools:** Computer with Web server and software,

**Resources:** your brain, google, Millennium Ecosystem Assessment (MEA), etc.

- Millennium Ecosystem Assessment <http://www.millenniumassessment.org/en/index.html>
- Assessments by topic from the MEA <http://www.millenniumassessment.org/en/Condition.html>
- MEA synthesis reports. <http://www.millenniumassessment.org/en/Synthesis.html>
- Re-Imaging A More Sustainable Cleveland (emphasizing the first few pages) [https://docs.google.com/file/d/0B9gEzUmYRccJMTZkMGMwNDAtZDViOS00NGVILWJiMDgtZDFiNWZiNTlkOWRh/edit?hl=en\\_US&pli=1](https://docs.google.com/file/d/0B9gEzUmYRccJMTZkMGMwNDAtZDViOS00NGVILWJiMDgtZDFiNWZiNTlkOWRh/edit?hl=en_US&pli=1)
- Cuyahoga Wetlands Report
- Northeast Ohio's combined Sewers <http://www.neorsd.org/cso.php>

**Submittal format:**

- 3 sticky notes
- 1-3 numeric or quantitative facts about each problem with key points, citation and references
- 1- 3 images (8.5 x 11) print outs with visual descriptions and/or quantitative data for graphic communication-- Images, Graphs, charts, and photos

**Due:** Next class period

**Evaluation Criteria:** Crossing scales (global to local), Clear Opinions (hunch), Factual Data support, Story, Relevance, Professionalism,