

Product/Output Title: EnviroAtlas: Incorporation of Community-Scale Data for Additional Communities

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Associated Project Number (in New Structure): 1.62

ORD Task (as listed in RMS): SHC 1.2.3.1, 1.2.3.2, 1.2.3.4, 1.2.3.6, 1.2.3.8 and 1.2.3.9

Suggested ORD Partner Contact/Intended audience for product: Multiple Program Offices including Sustainable Communities, Environmental Justice, OSWER, and EPA Regions.

Brief Description:

Background

EnviroAtlas is ORD's online spatial decision support tool for viewing and analyzing the supply, demand, and drivers of change related to natural and built infrastructure at multiple scales for the nation. Maps and text identify known relationships between the goods and services provided by nature and societal benefits, in order to facilitate a full accounting of how decisions affect progress towards sustainability. In addition to watershed-scale data covering the coterminous U.S., EnviroAtlas includes high-resolution landcover and metrics for selected communities; these metrics are summarized by Census block group. The community component of EnviroAtlas emphasizes local natural and built infrastructure with direct relevance to public health, together with fine-scale distribution of the population and disproportionately vulnerable groups.

Approach Taken

More than 100 metrics are developed consistently across featured communities; examples include number of residents within 300m of major roadways, percent of residents greater than 500m walking distance from a park entrance, and number of schools and day-care centers with less than 25% surrounding green space. In addition to block-group summaries, numerous metrics are provided at 1-meter resolution, such as tree cover along streams and roads, and hot spots of impervious surface and green space. EnviroAtlas communities are selected along geographic and other gradients to facilitate research and transferability of information. Varying widely in size and population, they are delineated based on the Census definition of urban areas and extend well beyond municipal boundaries.

Results

Twelve communities have been completed and posted in EnviroAtlas to date, meeting a key FY15 deliverable for SHC Project 1.62 of additional communities. These communities with boundaries based on the US Census Urban Areas encompass the following central cities and towns:

New Bedford, MA
Portland, ME
Paterson, NJ
Pittsburgh, PA

Durham, NC
Tampa, FL
Milwaukee, WI
Green Bay, WI

Woodbine, IA
Fresno, CA
Phoenix, AZ
Portland, OR

The EnviroAtlas, including the community component, was peer-reviewed in 2014, no further peer review was required for this deliverable.

Significance

Communities, EPA Program and Regional Offices, and other vested entities typically lack sufficient local environmental information to assess the full ramifications of many individual and cumulative decisions. Myriad activities of multiple organizations directly and indirectly affect public health, community resilience, social equity, and other key components of sustainability. Decision-support tools and information are needed to facilitate a more full accounting of the costs, benefits, and trade-offs involved in alternative actions. Fine-scale spatial data on urban built and natural features are a key component of this decision support, enabling more deliberate and integrated management of community assets.

Expected Use by Partners or Others

EnviroAtlas community data and information are already in use by local governments and academia. While unexpected uses continue to be revealed, the high-resolution maps and information are anticipated to be used in ways that include:

- Informing Health Impact Assessments (HIAs)
- Identifying locations for converting stormwater infrastructure from “gray” to “green”
- Prioritizing urban tree planting sites to optimize multiple public benefits
- Increasing equitable distribution of urban parks and greenways
- Empowering citizens to evaluate their existing and potential community green assets
- Educating the next generation of decision-makers
- Supporting the Rockefeller 100 Resilient Cities project and EPA’s Making a Visible Difference in Communities initiative

URL: <http://enviroatlas.epa.gov>