

US EPA ARCHIVE DOCUMENT

Integrated Solutions for Sustainable Communities – SHC 4.61

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Problem Summary & Decision Context

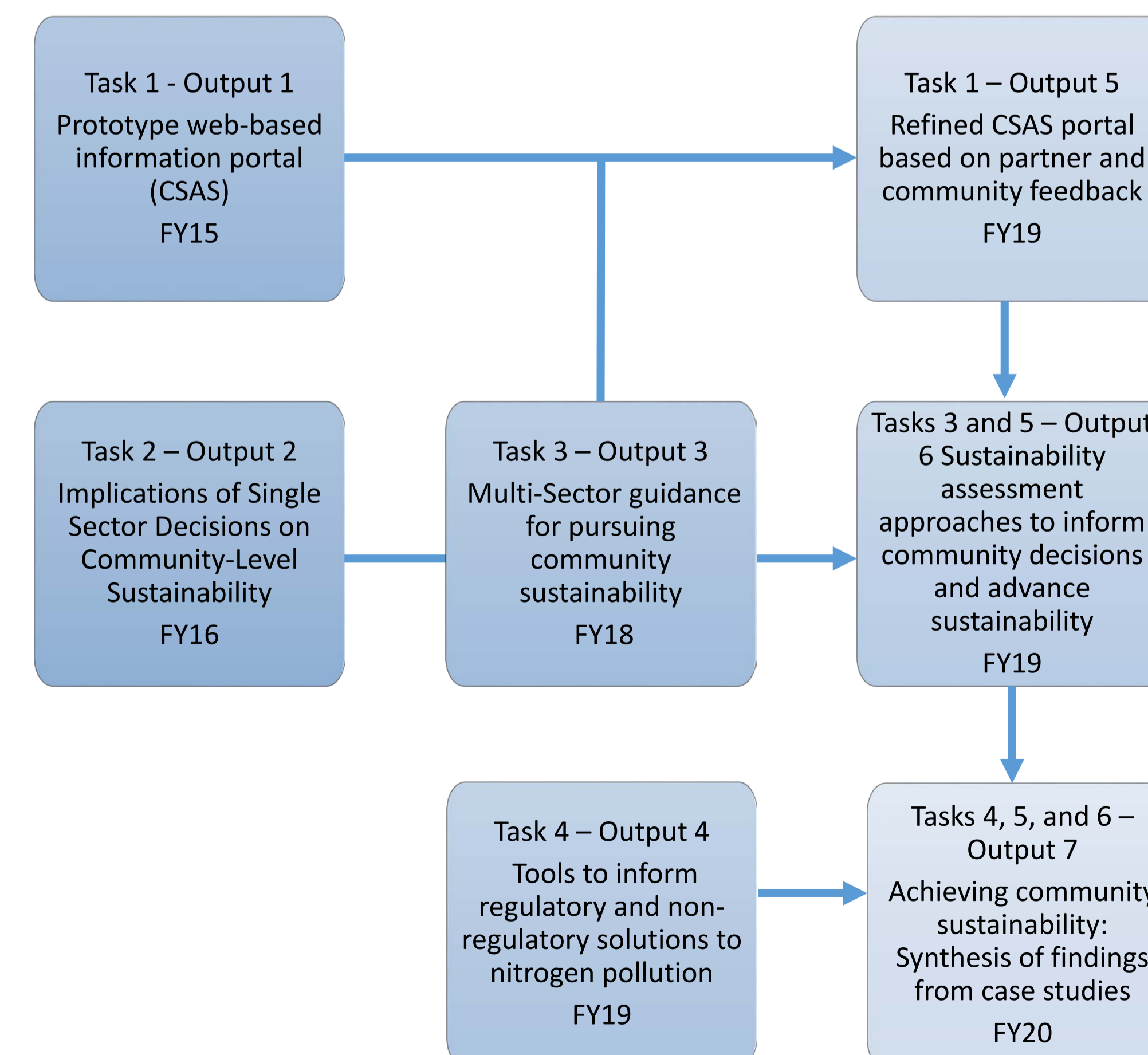
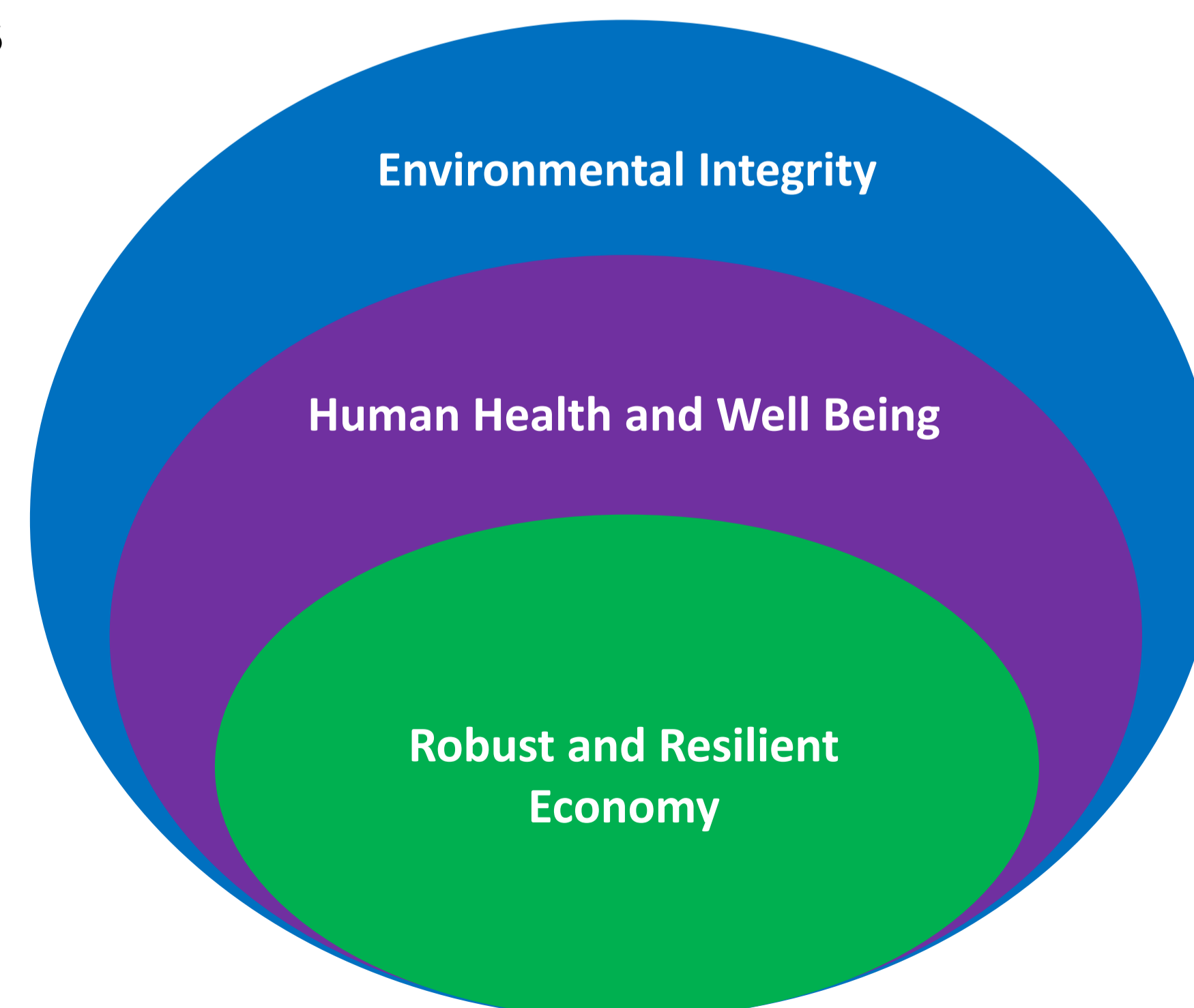
- Working towards a sustainable future is one of four cross-EPA strategies
- Communities face a variety of challenges moving towards sustainability
- Community decisions can have complex implications and unanticipated outcomes
- Decision-makers face complex issues - require new approaches
- Communities have differing capacity to address sustainability

Utility to Agency?

- This project will support Program Offices and Regions as they work to make our communities more sustainable
- Provide clear guidance to decision-makers on selection of tools and best practices
- Improve, extend and functionally integrate tools and approaches for sustainability assessment and
- Demonstrate both the use of a suite of complementary tools and the effectiveness of a holistic approach in resolving complex issues to promote sustainability

Accomplishments

- Developing Green Infrastructure wizard (GIWiz) – beta version
- Sector based sustainability reports: Buildings and Infrastructure, Materials Management, Transportation, Land use
- Durham Light Rail project:
 - Triple value approach (social, economic, and environmental) combined with EnviroAtlas (SHC 1.62) led to community decision to plant 600 trees at public schools in 2014
 - The Municipal Solid Waste Decision Support Tool was applied to promote sustainable waste and materials management strategies
- High visibility publication: “Cost of Reactive Nitrogen Release from Human Activities to the Environment in the United States”
- Cross-agency analysis of the impact of atmospheric nitrogen deposition on plant species richness across the USA.
- Development of a biofuels land use scenario using the EPA “One Atmosphere” modeling system.
- Application of N-sink model for use in watershed planning in the northeastern US



Future Directions

- Community Sustainability Analysis System (CSAS) (tool box):**
 - Task 1: Web Based Wizards for Sustainable Decision Making
 - Green Infrastructure Wizard (GIWiz)
 - Materials management/waste management
- Sustainability Assessment and Management:**
 - Task 2: Web browser for sustainability sector analyses
 - Task 3: Sustainability assessment and management for urban systems
- Case Studies:**
 - Task 4: Integrated nitrogen management



- Task 5: Sustainable port communities
- Task 6: Social-ecological systems for resilience & adaptive management in communities
- RESES program

Partner Engagement Opportunities

- Continued engagement with OP, Region 1, OW, OSC for development and delivery of GIWiz, and subsequent tools.
- Support, coordination, assistance with community engagement to ensure that we target and deliver guidance, tools and approaches that improve community sustainability