



# **EPA Science Advisory Board**

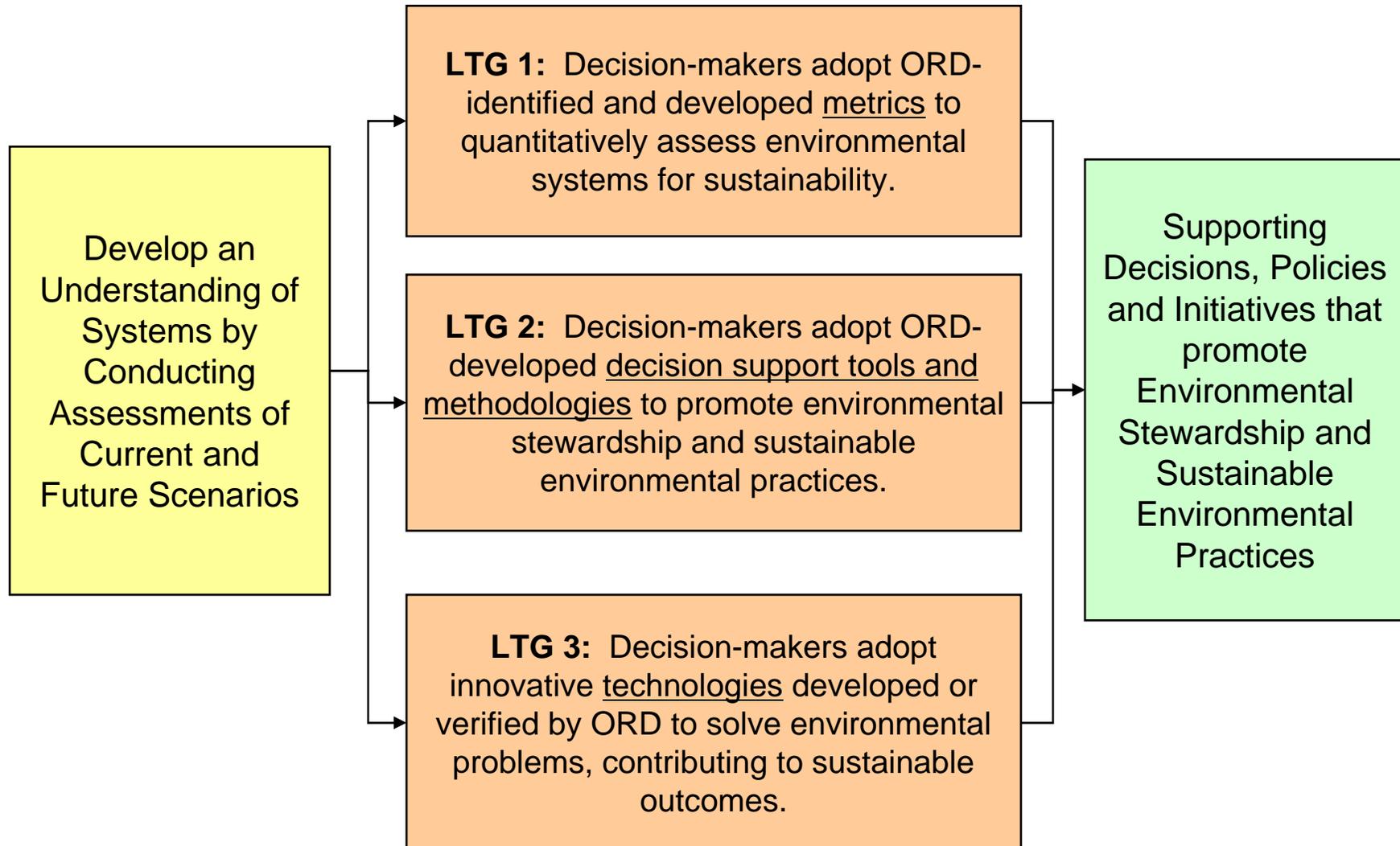
## **Science and Technology for Sustainability Program:**

**April 24, 2009**

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Office of Research & Development

# Science and Technology for Sustainability



# Accomplishments

- Focused STS LTGs on sustainable biofuel production as an integrating national issue
- Analyzed strengths and weaknesses of LCA-based tools for assessing environmental impacts of biofuel production (interoffice review to follow)
- Completed literature review of sustainability metrics
- Completed, with Region 8, first phase of San Luis Basin metric study – a test case for sustainability metrics in regional ecological and urban planning. Second pilot project in Puerto Rico under development
- Responding to stakeholder interests, developed a number of decision support tools, e.g., Waste Reduction Algorithm (WAR), MARKAL, MSW-DST, and LCA models
- Using ETV model, began negotiations on international ETV protocol, completed over 400 verifications with ETV, which 31 States are using in drinking water regulations, guidance, and permitting decisions
- Awarded \$580,000 for 58 P3 grants for innovative technology projects



# Biofuel Related Actions

- Launched – by ORD’s ESRP (“Eco’) program – the Future Midwestern Landscapes Study
- Led interagency development of sustainable biofuel criteria and indicators
- Led organization of EHS work group of Biomass R&D Board
- Led development of EPA Biofuel Coordinating Framework (*aka* EPA Biofuels Strategy)
- Funded six SBIR Phase-I biofuel technology projects (FY2007–2009)
- Funded twenty-one P3 Phase-I and three P3 Phase-II biofuel technology projects (FY2007–2009)

## Proposed Strategic Directions

- Partner with all Programs and Regions to advance research in support of sustainable biofuel production and use, focusing on current and next generations of feedstocks (See Hecht *CEP* article).
- Partner with OPEI, OSWER, OPPTS and States in supporting LCA and research on sustainable supply chain to advance management of materials – including industrial applications, infrastructure, green building, and sustainable urban development.
- Partner with OPEI, OEI and Regions to support development and application of sustainability metrics at national and regional levels.

## Anticipated Outcome

- Following congressional mandates, assess environmental and health impacts resulting from current biofuel production and use and project anticipated impacts from next generation of biofuel
- Working with EPA Programs and other federal agencies, develop criteria and indicators and pilot studies for measuring sustainable biofuel production
- Working with OPPTS, OSWER, OPEI and States, develop pilot projects showcasing LCA of material management and reduction of environmental impacts
- Continue national and regional case studies for development and application of sustainability metrics