

General comments on the Sustainable and Healthy Community Framework

- We applaud the integration of sustainability as an overarching (umbrella) theme for EPA (was previously a very small research program in ORD)
- SHC is visionary and inspiring; shows outstanding leadership and forward thinking ORD
- Community-based outreach and interaction are essential to sustainability
- Exciting new research area (positive framing, non-regulatory), with potential to catalyze support for EPA

General comments (cont.)

- Question about whether SHC is an over-arching program (that other programs feed into) or a co-equal with other programs – need to clarify this in Figures (Rick vs. Kevin)
- One view: SHC should be the center & driver of activity
- Recognition that some aspects of SHC are unique:
 - Focus on local/community level rather than national (place-based)
 - Broader holistic systems perspective (framing)
 - Focus on stakeholder participation & collaboration
 - Inclusion of non-regulatory decision contexts

General concerns

- Program is very ambitious and requires a lot of new research (place-based, social/behavioral/decision (SBD) science)
- Type of work is very hard to do
- Community-based, participatory work is resource (time) intensive
- ORD does not have the needed expertise, especially in SBD sciences

General concerns (cont.)

- **Providing decision support for communities (“empowering” local decision making) is good, but**
 - Who are the decision-makers/stakeholders?
 - Do objectives of decision-makers necessarily reflect community objectives (decision “failures” by local officials)?
 - How to define the relevant community?
 - Do community objectives align with broader national objectives? (“inter-jurisdictional spillovers”)

General concerns (cont.)

- Need to better articulate what ORD's role will be in providing assistance to communities
 - Providing decision tools/technical support vs. active participant in implementation?
 - ORD doesn't currently have experience/expertise in community-based implementation
 - Primary leader vs. supporting partner?
 - Need clear expectations and “exit strategy” – how far does ORD's (EPA's) commitment to active engagement with communities go?

General concerns (cont.)

- Integration across the three themes within SHC is unclear
- Mixed bag: cutting edge activities and support of “conventional” regulatory mandates
- Theme 1 is most innovative but less than 10% of resources initially – what will happen with budget cutbacks, given it is not a statutory “must do”?

General concerns (cont.)

- The Sustainable and Healthy Communities (SHC) program includes essentially all of the ecological research in ORD. As such there is a need to support ecosystem science within SHC. Ecosystem services and benefits are contained as one component, among others, in Theme 2 of the SHC Research Program. There is no discussion of ecosystem science apart from ecosystem services and benefits. There is a concern that ecological research, as well as the science necessary to understand ecosystem services and benefits, could well be under-funded and under-emphasized in the proposed research structure.
- Ecosystem science, which has seen a continued decline over the past years, is important for several reasons. Ecosystem science is vitally important for understanding how ecosystems function. From the perspective of EPA, ecological research is important for understanding ecological processes that underlie healthy ecosystems and the quality and quantity of the services offered by ecosystem to communities. In addition to understanding ecological processes, there is important research, both ecological and social science research, to translate ecological processes to ecosystem services and the benefits to the community of these services and to predict the changes in the provision of services that would result from various actions/policies/behaviors.
- Consequently, the committee feels that there is a strong need for continued, or enhanced, support for ecosystem research.

Q(a): strategic priorities

- There is a 1-1 mapping between ORD research structure and Agency strategic goals (science priorities)
- Consolidation of programs fosters integration (and hence “integrated transdisciplinary research (ITR)”)
- SHC is clearly reflective of “sustainability” goal (articulated by Lisa Jackson in NAS comments)

Q(a): cont.

- Areas for increased emphasis:
 - Children's health
 - Theme 1 topics
 - SBD science research
 - Support training and education
 - Epigenetics (as markers of exposure → indicator of "healthy")
 - Caution: can raise ethical, social, cultural, legal issues
- Areas for decreased emphasis?
 - Pooling of resources across agencies?

Q(b): Enhancing coordination?

- SHC can serve a “coordinating” role for ORD by
 - Defining ultimate goal: what are we trying to accomplish?
 - Taking a broad systems approach (e.g., reducing media-specific and disciplinary silos)
 - Utilizing research from other programs
 - Providing broader framing to guide more focused research in other programs (“what is needed”)
 - Integrating across national and local levels
 - Focusing on “problem solving” at the community level

Q(c): ORD's Commitment

- In general, SHC directly reflects commitment to sustainably protect health & environment
- But see previous comments/concerns about alignment between local and national perspectives

Q(d): Addressing high priority issues?

Yes, but

- Need to clearly identify where EPA/ORD will provide leadership and where it will play a supporting role in addressing issues (where it lacks primary jurisdiction or can't control "drivers")
- Clearly needs to partner with other agencies and NGOs as they work with communities to address high priority issues
- SHC may not necessarily align with national priorities if goals of communities differ from national priorities

Q(e): catalyze/complement other efforts?

- Consistent with momentum elsewhere to do ITR
- Regarding ecosystem services, EPA has played a positive role as a partner but ORD ES work is not very integrated with extensive ES work outside EPA
- Could leverage more with DOE and DOD on site contamination and cleanup issues
- Could leverage more with non-profits that work closely with communities
- No effective mechanism for catalyzing, complementing or leveraging SBD science research
- Could partner with NSF in supporting SBD science research
- Could serve role as clearinghouse for community-level data related to sustainability (e.g., “urban metabolism”)

Q(f): Innovation

- ORD should promote opportunities for community-based data collection, monitoring, and reporting
 - Technological innovation: hand-held devices or mobile phone applications for collecting and transmitting data
 - Process innovation: engagement of community
 - Note: needs to be subject to standard quality control

SBD Science questions

Roles for SBD science

- (1) “Scoping”: Problem formulation, systems perspective, identification of alternatives
- (2) Engaging in participatory processes
- (3) Understanding behavior, behavioral responses, incentives
- (4) Evaluation of alternative options and tradeoffs (impact analysis, benefit-cost analysis)

SBD science (cont.)

Examples of types of expertise:

- Psychology
- Economics
- Sociology
- Public health
- Urban planning
- Communications
- Decision Science
- Law
- Political Science
- Geography
- History

SBD Science (cont.)

Concerns:

- Many of science questions in SHC research program require SBD science research, but ORD does not have capacity, internally or through external funding, to do this research
- ORD seems to implicitly (and incorrectly) assume necessary SBD science is already “out there”

SBD Science (cont.)

Suggestions:

- EPA should look at how other agencies have engaged SBD scientists (e.g., Forest Service, other parts of USDA, management of wildfire risks)
- SBDS staff should be integrated within ORD programs
- One suggestion: have high-level SBDS person in each program area