

Minutes from the 4-07 08 CWC TIE Ohio Basin Project Exploratory Committee

Present:

Doug Alsdorf (representing the CWC and MPS)
Nick Basta (FAES)
Joseph Fiksel (ENG))
Andrea Grottoli (MPS)
Jialin Lin (SBS)
Richard Moore (FAES/OARDC)
Frank Schwartz (MPS)
Hal Walker (ENG)

The minutes from the 3-28-08 meeting with the three main ideas and framework were distributed along with feedback received from 3 scientists (Costa, Wilson, and Grottoli). Robyn Wilson, a CWC new hire, recommended that more social science be included. Richard reported that the Ohio EPA Director Korleski welcomed the CWC TIE ideas and wants to keep in the loop. Committee members discussed whether the framework be improved by placing theoretical ideas/science in the middle of the diagram (see 3-28-08 minutes) rather than being juxtaposed to decision-making. The relationship of science to applied policy was then discussed. It was pointed out that some agencies such as Ohio EPA have considerable data on the Ohio Basin and that exploring areas of mutual scientific interest may be useful.

Several members stated that researchers should start from the large-scale and work down using the micro-scale sites to verify the larger model. For instance, the global climate modelers can better predict Ohio's future climate. However, others felt that the opposite case could be made for small scale to work model up to large scale for instance in the case of modeling carbon and nutrient cycling or the modeling the process of agricultural intensification or exurban change. It was noted by some that there are significant areas of data lacking in some areas (such as carbon data) and that there may be a high level of uncertainty in the assumptions of large-scale modeling.

All members agreed that it would be useful to have 3-4 months spent assessing what data on the Ohio Basin exists and to start a general inventory. This would include contacting agencies and modelers within agencies.

Next the committee members proposed several questions for future research and that these are further thoughts to the ideas presented last meeting (not to replace them).

Characterize the current scientific understanding of present trends and the likely future evolution of the Ohio River Basin from the integration of climatology, earth sciences, biological sciences, and social sciences.

How does Land Use Land Cover affect the carbon, water, and human activity in the Ohio Basin? What would a carbon loading and nutrient loading model of the Ohio Basin look like? (It was also noted that there is insufficient carbon data on the Ohio Basin).

What are the human impacts of the cycling of water?

Develop a systems framework that identifies the cross-linkages between natural, social, and economic systems across multiple scales, including potential undesired impacts (e.g., loss of soil resilience).

Use this framework to guide an inter-disciplinary synthesis that identifies system linkages (e.g., carbon flux, water quality, and economic growth), critical variables that will drive system fluctuations, and potentially disruptive changes.

Identify alternative future scenarios that correspond to different possible evolutionary trajectories of the Ohio River Basin over a 20 to 50-year time frame (e.g., concentrated industrial growth, decline of urban centers, shift to a service economy).

Assess the policy options, technological needs, and potential interventions available today that will enable the region to avoid severe disruptions and steer toward desirable scenarios.