

Institutions, linking knowledge with action, and sustainability: A case study of the Arizona Water Institute (AWI)

Some organizations aim to improve the integration of knowledges with relevant actions. The Arizona Water Institute is an example....
What makes such an organization "effective," in the context of complex problems of the human-environment system?

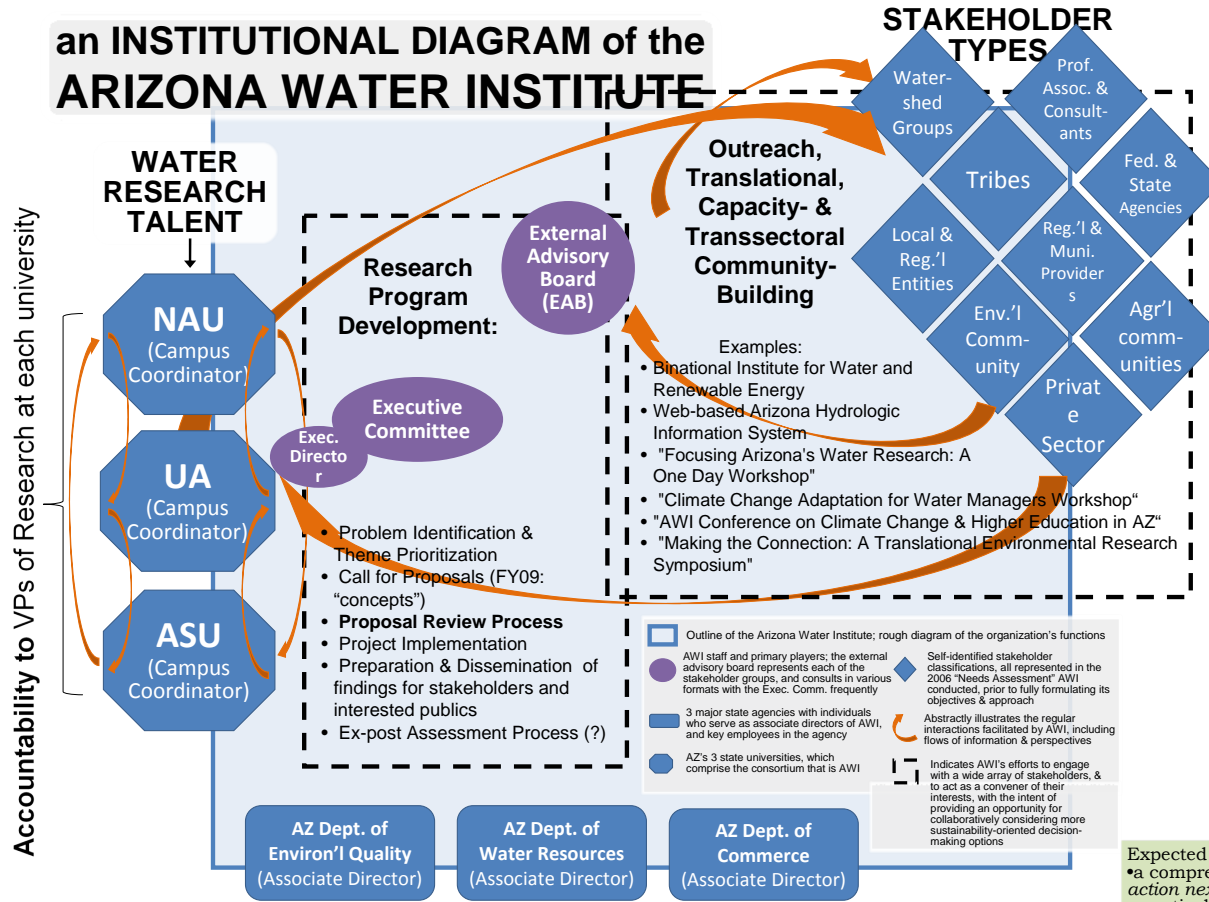
In its **exploratory** stage, this project is a study of the institutional role negotiating the relationships among knowledges and actions, for sustainability-oriented decision-making. Broadly, it relates to literature that investigates the ways in which science, diverse perspectives and training, and differentials of power and access affect policy. In this vein, the project analyzes the **qualities** of institutions devoted to facilitating communication, knowledge-sharing and collaboration, and supporting conditions for mutual understanding among actors and stakeholders of a particular problem context.

LITERATURE in the social studies of science and institutions in science policy have considered the question of how to understand the institutional role of integrating knowledges and actions. What have been so far insufficiently studied are prescriptive design guidelines or an approach to understand and evaluate the utility of these entities.

Cash et al (2003) reflect on the absence of study on how science and technology can "effectively" be brought to bear on sustainability problems. Applying Gaston's (2001) work on **"boundary organizations,"** the authors propose that efforts to do this "are more likely to be effective when they manage boundaries between knowledge and action in ways that simultaneously enhance the **salience, credibility, and legitimacy** of the information they produce."

Sarewitz and Pielke (2007) offer the simple conceptual device of the **"reconciliation of the supply of and demand for scientific information,"** which helps determine where and when there have been matches or "missed opportunities" in linking knowledge with action. Further,

Miller (2001) provides a theory of "hybrid management" - which, he suggests, "is the glue that links scientific, political, and other institutions together in modern political economies" - that involves **"hybridization, deconstruction, boundary work, and cross-domain orchestration."**



The RESEARCH PROCESS for this project clearly involves developing a deep understanding of AWI: *what it sees its role as and how it is addressing and engaging with stakeholder needs* - particularly the **proposal review process**, its **funding allocations** (especially by way of approved proposals), and **"lessons learned"** from completed collaborative projects.

The study examines AWI's actions, processes, and (to a minor extent) outcomes relative to its

- stated objectives,
- identified stakeholder needs, &
- expectations.

Criteria will be based upon characteristics of sustainability & democracy, with the intent to operationalize what it means to "effectively" manage the interests and jurisdictions of the different communities involved Arizona's water decisions (e.g. transparency & multiple levels of accountability; inclusivity, stakeholder representation & engagement; adaptability & reflexivity).

The **evaluative framework** is a working analytical device, which is continually framing and being framed by

- **document review** (e.g. call for proposals, Business Plan, brochures, etc.),
- **semi-structured interviews** (from a representative sample of the Exec. Committee, EAB, & stakeholders)
- **online questionnaire**, and at least one **focus group**.

Expected deliverables from this project include:

- a comprehensive assessment of AWI's capacity at the knowledge-action nexus, with
- practical recommendations as to enhancing this capacity,
- the development of a tool with which AWI (should it choose to) may use to evaluate itself regularly, &
- to contribute to the literature a novel evaluative approach.

Preliminary findings are purposely not shared, as data collection is still in progress. However, it is clear that what AWI has taken on is an immeasurably difficult mission, and its actions show its commitment to stated objectives.

This project focuses on the Arizona Water Institute (AWI), which is an example of an organization functioning to support interaction among communities involved primarily in knowledge & information (e.g. university scientists), & communities involved in "action" (e.g. practitioners). The diagram above simplistically illustrates some of the ways in which AWI functions at the "boundary" in Arizona's water governance regime, between the "producers" of scientific information and the "consumers."

Clea Senneville¹. Institutions, linking knowledge with action, and sustainability: a case study of the Arizona Water Institute.

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In its exploratory stage, this project is a study of the institutional role negotiating the relationships among knowledges and actions, for sustainability-oriented decision-making. Broadly, it relates to literature that investigates the ways in which science, diverse perspectives and training, and differentials of power and access affect policy. In this vein, the project analyzes the qualities of institutions devoted to facilitating communication, knowledge-sharing and collaboration, and supporting conditions for mutual understanding among actors and stakeholders of a particular problem context. It focuses on the Arizona Water Institute (AWI), which is an example of an organization that functions to support interaction among communities involved primarily in knowledge and information (e.g. university scientists), and communities involved in “action” (e.g. practitioners). It develops an evaluative framework, comprised of criteria based upon characteristics of sustainability and democracy, and attempts to operationalize what it means to “effectively” manage the interests and jurisdictions of these different communities (specifically involved in the governance of Arizona’s water). Research involves developing a deep understanding of AWI: what it sees its role as and how it is addressing and engaging with stakeholder needs – particularly the proposal review process, its allocation of funding, and “lessons learned” from completed collaborative projects. Further, this research examines AWI’s actions, processes, and outcomes relative to its stated objectives, identified stakeholder needs, and expectations. The evaluative framework is a working analytical device, which will frame document review, semi-structured interviews, online questionnaire, and focus groups, as well as the ultimate assessment of AWI’s capacity at the knowledge-action nexus.

A graduate student at ASU’s School of Sustainability, Clea Senneville, will be working with and studying AWI through the next year, as part her Thesis work. She is interested in the ways in which science, diverse perspectives and training, and differentials of power and access affect decision-making related to water resources. Her focus is on institutions that focus on facilitating communication, knowledge-sharing and collaboration, and supporting conditions for mutual understanding among actors relevant to effective water management. This interest in organizations that attempt to connect communities involved in knowledge and information (e.g. research scientists) with action communities (e.g. local decision-makers), has led her to AWI. Her work will involve three main parts. The first is developing a deep understanding of AWI; specifically, what it sees its role as, how it is addressing and engaging with stakeholder needs, and what sorts of projects it is supporting. The second part will be an examination of AWI’s actions, processes, and outcomes relative to its stated objectives and identified stakeholder needs. This component also includes looking for “lessons learned” in the AWI collaborative projects that may enhance the effectiveness of AWI and other similar organizations. The final part is focusing on specific AWI projects, helping to enhance the usefulness of the outcomes, e.g. participate in translation work, design engagement strategies for additional stakeholders, generate communication delivery materials, and/or connect with stakeholders directly to ensure their familiarity with particular AWI projects.

NOTES:

This project investigates the institutional role of linking knowledges and actions. With a focus on the Arizona Water Institute, it asks the questions, “how does an organization that claims to be committed to negotiating the knowledges and agendas of the practitioner and university communities

How to develop evaluative framework/criteria for an organization that claims to function as a facilitator of collaboration

What are the characteristics of an organization that “effectively” brings together diverse knowledges and actions, in a sustainability-oriented, just, and/or ethical manner?

What does it mean to be an “effective boundary organization”?

What are the characteristics of an organization that brings together diverse knowledges and actions, in a manner that contributes to sustainability-oriented, just, and/or ethical manner?

Particular emphasis is given to, with a particular emphasis on “lessons learned” in AWI collaborative projects.

It intends to contribute to related literature, by offering a novel approach to evaluating the effectiveness of these institutions ____.

Components of research:

-Evaluation

-Boundary organization

-University to practitioner relationship building and project generation