

## Making Civic Engagement More Accessible and Measurable

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Regulatory agencies, grant-making foundations, and those with an interest in the environment recognize both the value of, and need for, civic engagement, however it is defined. For example, regulatory agencies recognize that once they move their focus, and resources from a designated area, there is still the need for sustained environmental stewardship at that site. In our EPA-funded study we explored how civic engagement was defined and viewed, how "success" was measured and how environmental outcomes were quantified. Now we pivot to how can we make the civic engagement process more accessible, and how can we measure impact and how can we nurture sustainability.

Generally, we found that "civic engagement" (as it relates to environmental issues) is poorly defined, the process is inadequately understood, and there is a lack of metrics by which to measure impact or success. These findings starkly illustrate both the current gaps in the field as well as the need to develop operational definitions and metrics. Both regulatory agencies, who expend public funds, and private foundations, are in serious need of metrics that can measure outcomes and accountability.

We offer three actionable recommendations towards developing actionable Environmental Civic Engagement (ECE) measurements:

- (1) The creation of an "umbrella" organization, or center, that will facilitate interdisciplinary discourse and cooperation with funding agencies and government authorities on the subject of ECE.
- (2) The development of a clear and concise programmatic research agenda.
- (3) Establishing a common repository of ECE-driven data.

Moving forward we hope to develop a collaborative research agenda with the input and support of regulatory agencies and private foundations.

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The purpose of this project was threefold: first, we aimed to collect, inventory, and promote measures focused on capacity for civic engagement for agricultural and water management; second, we set forth to create a collaborative network comprised of academics, policymakers, and stakeholders, which would openly discuss issues surrounding civic engagement and environmental stewardship; third, we attempted to collect new data on civic engagement in order to enhance our understanding of the phenomenon. Our five major findings can be summarized as follows:

First, we were unable to identify the existence of robust, concise, and generalizable civic engagement indicators and data. Any past attempts to

develop such measures are either limited in scope or geographically restricted.

The term "civic engagement" has been widely used to denote a multi-dimensional range of activities and participants without a clear scholarly consensus on its meaning, definition, and operationalization. Although it was first introduced by Putnam (1993) in his seminal work *Making Democracy Work*, over the past 25 years "civic engagement" has gained popularity among the public, media, scholars, and policymakers alike, despite its conceptually ambiguous and ontologically convoluted nature. During this period, the concept of civic engagement has evolved from its original minimalist definition of a politically

engaged citizenry (Putnam 1993) to a buzzword used to describe “describe activities ranging from bowling in leagues to watching political television shows, writing checks to political advocacy groups, and participating in political rallies and marches” (Berger 2009: 335).

In our review of the civic engagement literature we identified several overlapping – and at times competing – theoretical perspectives. In political science, civic engagement captures social and political actions by individuals or groups towards the improvement of society (Berg 2013). Under this paradigm, civic engagement incorporates volunteerism and political involvement towards a fuzzy definition of “political change.” In psychology it pertains to “individual and collective actions designed to identify and address issues of public concern [...] such as working in a soup kitchen, serving on a neighborhood association, writing a letter to an elected official or voting” (APA 2018; also Battistoni 2002). Sociologists view civic engagement as a nexus of collective efforts to achieve a well-defined goal within a well-specified plane of interactions, in which the community, rather than the individual, is the theoretical focal point (Ehrenhalt 1996). Yet, certain political theorists contend that civic engagement is merely an irrelevant symptom of an active citizenry and civilian involvement that should be receiving less scholarly attention than civil society and social capital (Barber 2004; Cohen and Arato 1994; Putnam 2000). It is important to note that outside the confines of social sciences there has been sparse engagement with the phenomenon of civic engagement.

In order to avoid conceptual stretching and confusion, for the purposes of this study we have restricted our research to a particular aspect of civic engagement, namely environmental civic engagement (ECE), which we define as *organized activities performed by individuals towards their perceived improvement of environmental conditions*, particularly as it relates to efforts directed towards addressing nutrient reduction, non-point source pollution, and hypoxia in watersheds belonging in the wider Mississippi-Atchafalaya River Basin (MARB) area. An important element embedded in our definition is that such activities should result in an absolute net material cost to the individual(s) engaged, but an overall positive expected utility

as to rationally justify involvement. The decision to act is contingent on a pervasive perception of a “problem” that is a direct component of the decision-making calculus of the individual(s) involved. Under these conditions we, therefore, capture both latent volunteerism and coordinated actions, while we comfortably exclude attempts that seek long-term engagement rents and tangible compensation.

Shifting our focus to ECE in specific, we noticed that relevant research has recently attracted greater scholarly attention. We reviewed 58 articles and reports that contemplate environmental stewardship. During our review we found that scholars are using multiple terms to analyze behaviors falling under the wider ECE conceptual umbrella. Indicatively, some of these constructs are “community-based natural resource management (CBNRM),” “collaborative natural resource (or watershed) management,” “sustainability-centered environmental engagement,” and “grassroots ecosystem management” to name just a few. Although the terms may sound different, their analytical scope is largely similar as they all refer to collaborative behaviors that aim to improve environmental conditions.

A large part of this literature is concerned with developing models that explain “capacity,” which is considered a necessary precursor—and in some cases a robust predictor—to ECE. The common themes across these capacity building models are: a) individual characteristics (e.g. knowledge about issues, leadership traits, organizational skills); b) community characteristics (e.g. established networks, past collaborative experiences, issue-linkages); and c) the structure of opportunities (e.g. perceptive local governance, availability of resources, economic conditions). A particularly informative model of community capacity specifically addressing watershed management is offered by Davenport and Seekamp (2013: 1105; adapted by Foster-Fishman et al. 2001). This model (Graphic 1) visualizes how member engagement, relational networks, organizational development, and programmatic coordination cumulatively interact to lead to sustainable ECE.

Second, the primary reason behind the lack of such indicators can be attributed to the absence of a programmatic agenda guiding data collection

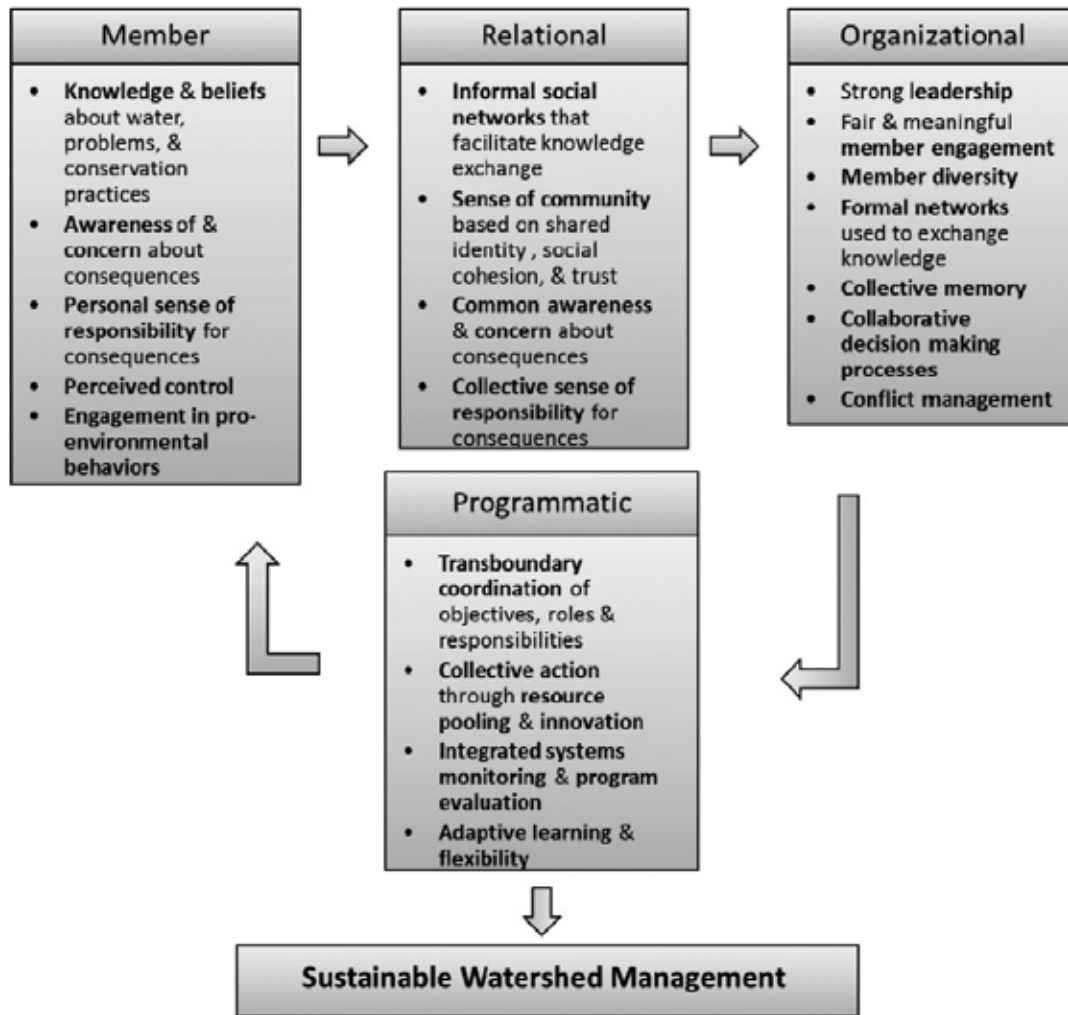


Figure 1. A Community Capacity Model (Davenport and Seekamp 2013: 1105)

efforts and the associated lack of resources that are necessary to maintain those. Despite the availability of tools and methods and the voluminous literature on civic engagement, during our extensive review of “white” and “grey”<sup>1</sup> literature we were surprised to find out that attempts to comprehensively evaluate empirical hypotheses are scarce. We were furthermore unable to identify any systematic efforts to collect primary data on ECE or develop relevant indicators. Some of the reasons behind the absence of such measurements are purely theoretical or methodological, such as the fact that environmental stewardship can encompass a variety of behaviors, the

problematic quantification of civilian involvement, disagreements over the most appropriate unit-of-analysis, the absence of commonly acceptable operationalization of traits and attributes, and the lack of a cohesive causal process. The absence of an interdisciplinary programmatic agenda, along with the logistics associated with creating a robust community of practice, are also impeding the thorough examination of ECE causes, determinants, and outcomes. That said, perhaps the single most important barrier to data collection and the creation of reliable ECE indicators has been the monetary cost combined with a lack of funding agencies willing to sponsor such initiatives. Just

<sup>1</sup> “White” literature refers to published peer-reviewed research, while “grey” denotes literature other than peer-reviewed (e.g. reports, working papers, executive summaries etc.).

to offer a single representative example, the Pew Research Center estimates that a simple dual-frame telephone interview survey of 1,500 subjects, constituting a true-random sample of the population, costs \$100,000.<sup>2</sup> For most researchers and practitioners of ECE this amount is prohibitive, more so if it were to be part of a repeated panel survey project. For these reasons ECE researchers have, for the most part, relied on self-reporting surveys and structured interviews with restrictions in sample size and issue-linkages.

A number of empirical studies focus on assessing, building, and maintaining community capacity as a precursor to ECE. Evidence suggests that the proximity of a rural community to an area of environmental concern, along with the emotional attachment it has developed to the territory surrounding it, predicts the community's attitudes towards stewardship more accurately than sociodemographic variables (Vorkinn and Riese 2001; cf. Brown, Raymond, and Corcoran 2015; Buta, Holland, and Kaplanidou 2014; Raymond, Brown, and Weber 2010). Building on these findings, Brehm, Eisenhauer, and Krannich (2006) contend that community attachment, common identity, and trust and respect among members create conditions conducive to grassroots involvement as they increase the capacity for action. Local governance also plays a role; the likelihood of success of these initiatives seems to be influenced by the willingness of local authorities to alert, educate, and encourage the public to get involved and develop a sense of ownership of their physical environment (Shandas and Messer 2008). Local governance may also facilitate cooperation between cross-cutting networks, while it has the ability to provide technical support and assistance in evaluating goals and progress (Fleeger and Becker 2008). However, Wagner and Fernandez-Gimenez (2009) caution against assessing ECE via social capital and community capacity. As their study reveals, collaborative involvement heavily depends on the quality of outcomes. If observed outcomes following a community project fail to meet expectations, the chances such an attempt will be repeated decrease, meaning that social capital may only affect the initial drive to action without ensuring longevity of involvement.

At the individual level empirical analyses are mostly concerned with personal traits or characteristics and their effect on attitudes and views towards ECE. Specifically, pro-environmental behaviors (PEBs) seem to be motivated by an individual's proclivity towards sustainability and their ability to comprehend the complexity of natural systems (Carfora et al. 2017). Individuals also appear to be motivated to act when they have already developed pro-environmental self-perceptions and identities, like considering themselves to be "vegetarian" or "recyclers" (Nigbur, Lyons, and Uzzell 2010; Trudel, Argo, and Meng 2016). Political attitudes and social networks may push individuals to solidify or reject such identities, since people express an innate tendency to emulate behaviors they observe with greater frequency (Brick, Sherman, and Kim 2017). In all, both capacity and identity are crucial to engagement; however, although the literature provides a framework of understanding how capacity can be expanded to assume PEBs, it does not explain how one develops her identity or changes it after its initial adoption (Steg et al. 2014; van der Werff, Steg, and Keizer 2013).

Third, members of our established network, particularly those representing funding agencies, are extremely interested in the development of indicators that would allow them to assess community capacity for civic engagement and evaluate the prospects of success given appropriate resource allocation.

As the primary sources of ECE funding, foundations were extremely interested in the development of metrics that would allow them to assess the feasibility and success prospects of ECE efforts. Moreover, contacted foundation representatives were very receptive to the idea of community capacity building through education and experimental initiatives. In fact, two of the foundations we contacted talked extensively about their attempts to develop civic engagement indicators internally, albeit unsuccessfully. The reason behind their interest in efficient assessment metrics is simple: return on investment is high when funding is allocated to environmental stewardship efforts with a high likelihood of achieving their stated objectives, attracting participants, and maintaining operations for longer periods of time. In the

<sup>2</sup> According to <http://assets.pewresearch.org/wp-content/uploads/sites/12/old-assets/pdf/cellphone-peoplepress.pdf>.

words of a foundation representative: “we want to know whether our funds are appropriately utilized, and so far we have no clue on how to make such judgements.”

These interviews highlighted two important aspects of ECE in practice, outside the analytic microscope of academic literature. First, no entity has developed nor is using civic engagement indicators or has a comprehensive plan to develop such metrics for that matter. Although such a toolset would be immensely valuable in promoting and evaluating ECE, there exist significant barriers to obtaining relevant metrics. Among those the most obvious one is the cost associated with developing indicators and administering the instruments necessary for data collection and refinement. Absent significant external funding or collaborative effort, no party denoted interest in unilaterally undertaking such a project. Second, as most of our partners highlighted, ECE is so complicated that even if we assume availability of resources, they would not know where to start. Should the development of an ECE suite of indicators begin with measuring community or individual capacity? If yes, how would that project be structured and implemented? Should the focus be on environmentally troubled areas only and, if yes, what would the selection criteria for those be? What is the scale of the phenomenon that should be measured? Should isolated activism and/or volunteerism factor into the metrics? Is the primary objective to understand how ECE is caused or is it to understand how it succeeds? What should be considered as evidence of success?

Fourth, our model of civic engagement (presented herein) and the data we collected through semi-structured interviews suggests that civic engagement data should be collected on the individual level, thus reinforcing the calls for systematic collection efforts.

Specifically regarding the data collection effort, our primary interest should be in obtaining accurate individual-level data that includes personal attitudes towards environmental stewardship, beliefs towards activism, leadership skills etc. Along these observations, we should also be interested in subjects' socioeconomic background, education, age, and other relevant controls, as to make our data externally valid. Moreover, our data

should be combined with geographic elements and local water quality indicators in order to be across-case comparable. These collected data should not capture a snapshot in time; to the contrary, they should be part of a repeated (i.e. longitudinal) panel that will afford us the opportunity to measure change over time and compare it with relevant natural effects.

In that respect, to obtain the data we require in order to develop ECE metrics we propose for the creation of a three-step project. The first step is to develop and administer comprehensive surveys with a truly random population sample in targeted areas along the MARB, whose selection needs not be randomized. Those areas need to include both urban and rural communities in order to assess quantitative differences between the frequency and propensity of ECE behaviors. Surveys need to be designed in a manner that captures individual tendencies, character traits, personal attitudes, socioeconomic features, perceptions about the environment, normative predispositions, and behaviors associated with activism widely construed. An ideal number of administered surveys would be 4 per MARB state, while the sample size for each survey should not be smaller than 150 respondents. Given that this is intended to be a longitudinal tracking project, survey need to be repeated in regular intervals (e.g. every 3 years), which will allow us to observe and quantify changes in attitudes and behaviors given similar external stimuli. It is important to note that, to ensure the collected data hold under methodological scrutiny and validity concerns, the survey instruments need to be the same no matter what their targeted population is, and they need to be administered to all selected samples concurrently. Surveys that are repeated every 3 years in MS versus surveys repeated every 7 years in AR will eventually present us with systematic irregularities and prevent us from across-case comparisons.

Beyond acquiring quantifiable individual-level data through surveys, the second step of this operation should be devoted to obtaining qualitative data focusing on community capacity. This effort should target the selected areas and conducted via strictly structured interviews. The purpose is to gauge the capacity of a community to undertake environmental action and develop a sense of environmental ownership. Under this frame of mind, interviewers

should ideally set up interviews with identified community leaders and local government representatives in order to assess whether an understructure of civic engagement exists. Such interviews serve a dual purpose. First, they supplement surveys as they capture unobserved community-wide qualities. Second, they allow us to map civic engagement networks, present or latent, that could be activated or cultivated in the future. As with the surveys, structured interviews should be regularly repeated as to evaluate measurable changes in capacity, both within and between communities.

In order to develop civic engagement indicators, a new multistep project of systematic data collection needs to be initiated. Such a project requires the administration of panel surveys, performing structured interviews, and obtaining physical data on water quality. Combined, those three data sources will provide us with the necessary tools to evaluate progress, as well as to predict and prescribe solutions to pressing environmental issues. Ultimately, this data toolset will allow for a horizontal dissemination of available information to researchers, community leaders, and policymakers alike, leading to collaborative efforts in assessing and promoting ECE behaviors.

Fifth, given the above, our recommendations are the following: maintain and expand the collaborative network created by this project, develop a programmatic research program on ECE measures, and establish a common repository of ECE-driven data.

**(1) The creation of an “umbrella” organization, or center, that will facilitate interdisciplinary discourse and cooperation with funding**

**agencies and government authorities on the subject of ECE.** In order to develop measurements, there first needs to exist agreement on what exactly is being measured. This could be achieved by establishing a new collaborative effort, housed at an academic institution. This center would be tasked with being the central node in a network of scientists, funders, and policymakers, providing them with guidance and facilitating coordination.<sup>3</sup>

**(2) The development of a clear and concise programmatic research agenda.** A major part of the difficulties with understanding the root causes and measuring the impact of ECE relates to a confusion around the concept itself. We propose the creation of a programmatic agenda that is designed to identify specific research areas. Developing and maintaining an agenda (and corresponding theoretical advancements or findings) under a single roof would be beneficial to incentivizing scientific cooperation.

**(3) Establishing a common repository of ECE-driven data.** Equally important to the above is the ability of interested parties to access, evaluate, and validate available data, as well as a hub for the collection of new data. This could begin with the very simple step of compiling a list of active GEGs in a single state, which would be expanded to include other states, relevant agencies, and potential ECE funding sources. Although such basic information is extremely important to scholars and policymakers alike, there have not been any efforts towards that end to date. The ultimate goal would be to create a research hub where publicly available data on ECE—drawn from surveys, interviews, or experiments—would be maintained.

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<sup>3</sup> An example of such a collaborative effort could be considered the NSF’s Research Coordination Network.

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