

Partnering for Environmental Sustainability: A Case Study of a University's Participation in the Community Action for a Renewed Environment Program

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Abstract

This article examines an important policy initiative that creates self-sustaining partnerships among community stakeholders, including academic institutions. The Community Action for a Renewed Environment (CARE) model of collaborative problem-solving (CPS) builds community capacity and knowledge while addressing the challenges of toxic pollution at the local level. This model places the community at the center of learning, discovery, and engagement, all of which are interests shared by metropolitan universities.

We must now conceive the city, accordingly, not primarily as a place of business or government, but as an essential organ for expressing and actualizing the new human personality—that of ‘One World Man.’ The old separation of man and nature ... can no longer be maintained: ... the entire planet is becoming a village; and as a result, the smallest neighborhood or precinct must be planned as a working model of the larger world. Now it is not the will of a single deified ruler, but the individual and corporate will of its citizens, aiming at self-knowledge, self-government, and self-actualization, that must be embodied in the city. Not industry but education will be the center of their activities; and every process and function will be evaluated and approved just to the extent it furthers human development, whilst the city itself provides a vivid theater for the spontaneous encounters and challenges and embraces of daily life. (Mumford 1961)

Challenged by the disproportionate burdens of poverty and pollution, urban communities have struggled for more than two decades to improve the quality of life of their citizens. While past efforts focused on meeting immediate needs such as environmental remediation, new initiatives focus on a more comprehensive approach to addressing issues of environmental sustainability. Cities, once subjects of “deified rulers,” are engaging in self-government and self-actualization in the pursuit of creating conditions and processes supportive of human development.

This change in focus has implications for universities located in urban and metropolitan areas seeking to strengthen their surrounding communities. The communities' expectations of the university's role in building a sustainable future are expanding and the breadth of university involvement is being challenged. The practical implication is that both communities and universities are in a process of redefining partnerships. Creating knowledge, whether pure or contingent (Lerner et al. 2000), while important is no longer the university's sole or even, in some cases, main contribution. Mutually beneficial partnerships (Baum 2006) resulting in knowledge creation while solving critical problems—that is, applied knowledge—have met with success, particularly in cases of neighborhood revitalization (al-Kodomany 1999; Mullins and Gilderbloom 2002).

Environmental sustainability, however, will challenge these partnerships in unique ways and provide academic institutions with an opportunity to more fully integrate the university into community life. The partnership of Indiana University Northwest (IUN) with the Community Action for Renewed Environment (CARE) initiative in the City of Gary, Indiana, serves as the basis for a case study of a partnership focused on sustainability. The experiences of this two-year collaborative effort have revealed a useful model of engagement for universities seeking to effect positive change in an urban community that has struggled to define its future and now seeks sustainable, green, long-term change.

The program's mission is to create self-sustaining partnerships consisting of communities and their stakeholders, including academic institutions. The CARE partnership model of collaborative problem solving (CPS), an initiative of the United States Environmental Protection Agency (EPA), provides the framework for such a community and university collaboration (USEPA 2008).

Using a case study approach, this article examines the CARE partnership model and the university's role in addressing toxic pollution at the local level by building community capacity and creating knowledge. Indiana University Northwest, located in the city of Gary, serves the larger Chicago/Northern Indiana metropolitan area. This area ranks among the worst in the United States with regard to toxic releases and their associated health risks. In addressing these issues of environmental sustainability, the CARE model provides opportunities for the university to engage in discovery, integration, application, and teaching consistent with the Boyer model of scholarship (Boyer 1997). This expanded definition of scholarship, adopted by many institutions as well as accrediting bodies, addresses the concerns of community stakeholders regarding the university's place in society. Faculty roles are being redefined and performance standards are changing to include the principles of integration and application in the community and in the classroom. Funding agencies such as the US EPA are following suit by encouraging collaborative university-community projects. Communities also benefit from the opportunity to build long-term partnerships with universities in support of environmental sustainability.

The author argues that this model of collaboration provides an opportunity for the university and the community to effectively create a process for discovering public health issues, identifying solutions, creating consensus, and, ultimately, creating a more socially just and environmentally sustainable community. Importantly, the model also provides valuable lessons for application to future partnerships. University leaders, faculty, and community leaders interested in building partnerships for long-term sustainability initiatives will be interested in the lessons learned and the actions planned.

To better understand the challenges faced, the article first examines the tenets of sustainability as applied in the urban context. The sustainability systems-oriented approach to improving a community's quality of life challenged existing models of university-community partnership. In the second section of the article the predominant models of university-community partnership are examined. A new partnership model of collaborative problem solving, employed in the CARE project, is highlighted and the university's role as a partner is explored with an eye to lessons learned and suggestions for future engagement initiatives.

The Challenge of Environmental Sustainability in the Urban Context

The concept of sustainability has captured the attention of citizens, government leaders, and universities over the last two decades and more significantly in the last five years. It has in many ways revolutionized the way we see ourselves in the world. Starting with the basic definition originating from the WCED report "Our Common Future," "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs," the challenges of creating and implementing plans in support of this ambitious goal have not gone unnoticed (WCED 1987, 43).

Over time the concept has evolved to include different themes, one of which is that of "sustainable cities" (Portney 2003, 2). Creating sustainable cities is a long-term process spanning decades as actors seek to create a vision of sustainability that addresses social, economic, and environmental concerns simultaneously. For cities embracing the concept of sustainability, a new view of their place in the world is being formulated. The city is a component of a larger system—a whole. By recognizing the interconnections among ecological, economic, and equity issues, boundaries are transformed. Hard boundaries, created as defenses against outsiders, can no longer survive. For example, sound ecological practices require an integration of local resources into regional and even global resources planning practices. Symbolic social boundaries (Berry and Denis 2006) must be recognized and renegotiated to identify common interests. Economic issues are refocused to include distributional as well as growth considerations.

In the process of redefining the city as sustainable or in moving on the path to sustainability, fundamental questions are asked, “What do we need (as opposed to want)?”, “What time frame is useful in defining the ‘future’?” and “Where do we start?” Universities are posing similar questions, as evidenced, for example, by member institutions of the Association of University Leaders for a Sustainable Future (ULSF). The ULSF is the Secretariat for signatories of the Talloires Declaration of 1990, a statement aimed specifically at defining and promoting sustainability in higher education. In the declaration university leaders publicly stated their concerns regarding the state of the world and identified key actions that institutions of higher education must embrace to create a sustainable future, including a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations, and outreach at colleges and universities. Over four hundred university leaders in over fifty countries have signed it. This confluence of events provides a unique opportunity for redefining university-community partnerships.

However, not every community (or university) is in a position to engage in a full-scale sustainability initiative; instead, some must embrace select opportunities to move sustainability principles forward. This is particularly true for older industrial cities plagued by social, economic, and ecological hardships.

The city of Gary, Indiana, has a long history of such hardships. Located on the southernmost shores of Lake Michigan, Gary’s origins lie in the development of the steel industry. This city was formed in 1906 by the United States Steel Corporation and its successes and failures are tied closely to fluctuations in the steel industry. The 2000 U.S. Census reported the population of Gary to be 102,746 (U.S. Census Bureau 2000). At that time, of U.S. cities with populations of 100,000 or more, Gary ranked first in the percentage of population that is African American—84 percent (McKinnon 2001, 7). More recent data from the 2008 American Community Survey estimates Gary’s population to be 83,487, moving Gary from the second to the fifth largest city in the state (U.S. Census Bureau 2008). During the 1960s economic losses and social conflict led to the withdrawal of the Caucasian population to more suburban and rural areas.

Located in the Calumet region, the city and the region inhabitants were once proud of their “industrial pre-eminence” —the economic foundation (U.S. Works Projects Administration 1939, 4). To accomplish this amassing of great industries (U.S. Works Projects Administration 1939), a topographical transformation had to occur. Sand was literally wheeled into the lake to form the bridges necessary to support the tanks of another large industrial corporation in the area, the Standard Oil Company. This infill changed some of the most beautiful dune country in the U.S. permanently. The area’s “singing” sands and shallow waters, popular beach recreational areas, and invaluable habitat conformed to economic demands. Today, these areas suffer from some of the worst pollution in the country.

The long history of pollution, combined with current emissions, places Gary among U.S. cities with the highest toxic releases and associated health risks. One of the top twenty facilities for water discharges of reproductive toxicants in 2007 is located in Gary. The city shares the distinction of being home to four waterways on the list of the nation's top fifty that received the most reproductive toxicant releases: Lake Michigan, the Little Calumet River, the Grand Calumet River, and Burns Ditch. In addition, the state of Indiana led the nation in the total amount of toxic discharges to waterways in 2007, with more than 27 million pounds (Dutzik, Crowell, and Rumpler 2009).

These social, economic, and environmental challenges are also opportunities. The Northwest Indiana/Calumet region and the city of Gary, in particular, are on the cusp of renewal. Indiana University Northwest's presence and interest in addressing regional challenges is longstanding but successful long-term partnerships are limited at best. Poverty, racial discrimination, economic stagnation, and brownfields, for example, were the focus of select initiatives whose impact was determined largely by grant cycles and endowments. This is not an atypical model.

The process of relationship-building between community and university partners also faced the challenges of perceived power differentials, maintaining sustained dialogue given divergent academic and community timelines, and differing expectations with respect to resource commitments. The IUN community-university partnerships are not unique in this respect, as researchers have documented and examined these challenges at length (Bosquez et. al. 2009). Over the course of the last 20 years, the considerable effort expended by university researchers on evaluating the barriers to and opportunities for successful partnership led to the development of a set of community engagement models. The following section of this article examines the predominant models.

Community-University Partnerships

Research on community-university partnerships focuses on urban environments, where the call for collaborative problem solving is loud and the need is pressing. Romanos et al. have noted that the relationships studied are both varied and complex (2006). Nevertheless, researchers have modeled relationships based on their key characteristics, including the nature of the partnership's goals, the degree of partner involvement, and the expected length of the relationship.

Romanos et al. (2006) examine four predominant models of community-university partnerships: the entrepreneurial model, the engaged university model, the social venture partnership model, and the civic engagement model. Each model defines the role of the university in a slightly different way and therefore provides an opportunity for differing levels of participation based on the university's ethos and community expectations. Table 1 presents a summary of these models based on three key characteristics.

Table 1. Community-University Partnership Models

Engagement Model	Nature of the Relationship	Scope of University Involvement	Expected Length of the Relationship
Entrepreneurial	Unequal partnership; University serves as a source of knowledge and research	University partners with the global community for the production of new knowledge	Time required to acquire and produce new knowledge
Engaged University	Unequal partnership; university pursues traditional teaching, research and service objectives	University produces service projects of value and interest to the regional/local community	Short-term relationship defined largely by the academic calendar
Social Venture Partnership	Move toward equal partnership; university becomes engaged in longer-term service projects	University engages in comprehensive examination of issues of power, justice, social change	Potential for deeper long-term relationships as issues of power etc. are explored
Civic Engagement	Collaboration	University undergoes self-reflection based on community input; transforms curriculum, teaching methods, research agenda	Long-term relationship serving as the basis for community

A careful review of Table 1 reveals an evolving role for the university as we move down the table from the entrepreneurial model to the civic engagement model. Specifically, the nature of the relationship moves from unequal partnership to collaboration, the scope of university involvement begins with knowledge production and progresses to pedagogical transformation, and the length of the partnership relationships increases.

Under the most traditional model of engagement (the entrepreneurial model), the university seeks partnership in order to produce new forms of knowledge (Romanos et al. 2006b). The traditional research university focus is maintained and community input is sought to determine relevant research issues. The community, once a client, is now a partner in the university's mission of knowledge creation. However, there is a danger that appropriate outcomes, meeting the needs of the community, are not realized as universities focus on niche innovation (Muller and Subotsky 2001).

Under the second model, the "engaged university" seeks to integrate teaching, research and service activities by pursuing interdisciplinary partnerships with the public and private sectors. While the university continues to carry out a three-pronged approach to education, the community experiences the benefits of engagement in the form of

project outcomes (Romanos et al. 2006b). Under this form of partnership, university faculty/students communicate with community leaders to determine an immediate need and subsequently organize shorter-term research and classroom projects around community issues. Internships are another means of serving the community under the engaged university model.

The Social Venture Partnership model seeks comprehensive involvement of community actors, by attending to the issues of power, justice, and social change (Romanos et al. 2006b). In going beyond short-term cookie-cutter internship programs, the systematic approach of addressing issues related to the participants' positions of power creates deeper involvements (Hendrickson 2001).

The last model examined is the civic engagement model. University and community partners share knowledge, learn, and build a consensus around civic issues and problems. Collaboration requires an examination of the fundamental values of each of the actors in the participatory process. Self-reflection leads to transformation and change. University partners under this model have transformed their curriculum to reflect community priorities and existing socio-economic, cultural, and political conditions (Ostrander 2004).

Within the civic engagement model lies the potential to create long-term relationships that possess social and political clout sufficient to move the sustainability agenda forward. In this way, the university takes on multiple roles. It serves, for example, as a knowledge base, facilitator, educator, affected community member, and leader. These roles are modified by the needs of the partnership as a whole. The model also provides universities with an opportunity for faculty to pair their skills and interests in teaching, research, and service to create sustainable communities. As Bringle et al. (2007) point out, civic engagement can occur in service-learning (teaching), professional community service (service), and participatory action research (research) realms of faculty work and university life.

One example of civic engagement based in the collaborative problem-solving (CPS) approach can be seen in the CARE partnership involving the city of Gary and Indiana University Northwest. The CPS framework engaged faculty and students in each of the three familiar components of the university mission, while moving the community along the path to sustainable development. Participating in this new partnership model also provided university faculty and students with the opportunity to reflect upon existing teaching methods, research foci, and their approach to service in the community. Similarly, non-university partners, some of whom with limited or no prior university contact, had an opportunity to define or redefine the university's role in collaborative processes. By leveling the playing field, the CPS approach changed the partnership dynamic and the frequent basis for unsuccessful partnerships, namely "unequal players [brought] to an uneven table to participate in difficult, predetermined decisionmaking" (Roe et al. 1997, 310), was limited.

CARE, the CPS Model, and the City of Gary

In 2007, the City of Gary was awarded a Level 1 Community Action for a Renewed Environment (CARE) grant. The CARE program assists communities in creating innovative ways to organize and take action to reduce toxic pollution. Under Level 1 of this program, the City of Gary created a partnership with over 20 different stakeholders, including Indiana University Northwest, for the purpose of identifying issues of concern and developing an action plan.

The CPS Model

The CPS model, adopted by the EPA under the CARE grant initiative and the city, is an integrative process whereby objectives are identified, implementation strategies are created, and plans are executed. By focusing on common interests, a diverse set of stakeholders tackle the issue of toxic contamination, which has social, economic, and environmental implications. The CPS model is an excellent example of working together to create a collective vision. By studying the CPS model, universities and communities alike will better understand the complex process of creating a shared vision that will serve as the basis for action in the future. This commitment to creating shared values and goals is a deep form of engagement (Kezar 2007).

The CPS model is of interest for a second reason as well. This model was initially developed by the EPA and other federal agencies through the Interagency Working Group (IWG) on Environmental Justice (USEPA 2008). The Office of Environmental Justice (OEJ) developed the model into an effective approach for addressing local environmental/public health issues involving various stakeholders (USEPA 2008). The adoption of this model shows significant strides in the thinking of a federal agency. A subtle transformation is occurring. Power is being handed to the communities and their stakeholders to define their future vision of sustainability. Just as universities are now coming to the table with a renewed interest in public purposes and with a mind to reshaping and expanding previously held boundaries (Sandmann and Weerts 2008), so too are government institutions.

University and community partners employing the CPS model to tackle complex social, economic, and environmental issues consider seven interdependent elements that guide stakeholders in developing a collaborative decision-making process. While not all elements must be addressed in every circumstance, each can be a valuable tool for the community struggling to achieve sustainable development. The seven elements are as follows:

1. Issue identification, community vision, and strategic planning
2. Community capacity-building and leadership development
3. Consensus-building and dispute resolution
4. Multi-stakeholder partnerships and leveraging of resources
5. Constructive engagement by relevant stakeholders
6. Sound management and implementation
7. Evaluation, lessons learned, and replication of best practices

The CPS Model in Context

The usefulness of the model is best understood in the context of the CARE project. This section examines each of the elements and discusses their application in the project.

Issue identification, community vision, and strategic planning

Issue identification, community vision, and strategic planning involve identifying problems, envisioning solutions, and then setting goals (USEPA 2008). In the early stages of this process, the community must identify existing leadership and experience, engage citizens, and identify partners. This occurs generally through city/community efforts to reach out to organizations that are aware of the problems. Visioning and strategic planning will move the partnership beyond problem identification. While this part of the task sounds relatively straightforward, for communities disproportionately impacted by environmental harms and possessing limited resources, it also can seem overwhelming.

Many partners initially come to the table with a general awareness of their concerns. They express these important concerns using phrases such as “bad air” or “dirty water” and cannot specifically identify the source(s) of the problem, the extent of the problem, and possible solutions to these substantive issues. At other times, the partners also face concerns related to process (USEPA 2008). Stakeholders may feel they do not have a voice in the decision-making process. Visioning and strategic planning provide the stakeholders with an opportunity to express their concern, identify shared interests, and propose future action.

The IUN role in the CARE partnership began in the issue identification, community vision, and strategic planning stage of the project. The university was selected as a partner in part because of faculty expertise and a potentially valuable set of student resources. From the beginning, however, the university participated as one of more than twenty partners and not as a lead institution. As a partner, one faculty member, one representative of the university’s Center for Regional Excellence, and one representative from the university library regularly participated in monthly meetings.

Initial conversations centered on the issues of knowledge acquisition and creation. The community’s perspective was clearly stated. The university’s role was to share existing information and collect information needed to determine which environmental issues were of highest concern. Many of the partners initially appeared to assume that the university (and the government) would already possess much of the data and knowledge-based resources required to address toxic contaminant issues. The perceived solution required only that the university share their knowledge. So, for instance, in regard to the problem of children’s lead exposure, partners believed that local data on childhood lead exposure existed or the university could quickly obtain such data.

At this point issues regarding cultural differences emerged. The university was willing to share any existing data, although little existed, but it did not have the immediate resources to conduct detailed lead exposure studies that would satisfy perceived data

needs. In addition, the university culture could not accommodate such a rigorous demand on faculty or student resources. Meanwhile, the university's culture led to the assumption that the community would provide a set of prioritized issues to guide future research, teaching, and service activities as well as a comprehensive vision and strategic plan.

Finally, all partners began working at a more fundamental level with the inherent challenges of negotiating roles for the partners. Through a process of informal negotiation (conversations outside formal meetings) and formal negotiation (providing input in scheduled meetings), the partnership discovered that short-term and long-term concerns must be addressed in the strategic plan, with partners seeking outside as well as internal resources for resolving priority community issues.

Sitting at the table on a regular basis, IUN began the process of developing relationships and forging ties that would eventually be considered elements of professional service in the civic engagement model. Regular attendance at monthly meetings cemented, in the minds of the partners, the commitment of the university to the process as opposed to the outcomes. In addition, the university participants assumed varied and multiple roles in the visioning and strategic planning stage, including educator on environmental health impacts of toxic contaminants, informal facilitator of negotiated priorities, and spokesperson for university concerns. This level of engagement broadened community member perspectives of the university's role in the project and in the city. Non-university partners reached out to university participants to share ideas, such as the need for a university program addressing environmental policy concerns, as well as to seek information related to project goals.

Community capacity-building and leadership development

Community capacity-building and leadership development complement the strategic planning process. In this step, stakeholders educate themselves about the issues, determine data gaps, and gather appropriate information. Assessing the causes of the problem and identifying solutions provide the community with the foundation for future action. At this point, the partnership may decide to identify technical experts and consultants. Building community interest is also important and sharing newly acquired information in public meetings is one way to involve the community in the process of formulating solutions.

At this stage of collaborative problem-solving, IUN assumed the more traditional role of educator and resource provider. The university was invited to present information to the CARE partners on children's health issues related to toxic contaminants. The partners benefited through this educational exchange by acquiring new knowledge and an appreciation of the increased vulnerability of children to toxic contaminants. The university engaged a student to prepare the presentation and assist in its delivery, thus providing a limited but valuable service-learning experience through an independent study project. The student also participated in preparation and delivery of presentations at the national CARE conference sponsored by the U.S. EPA.

The evidence that partners benefited is largely informal but nevertheless significant. Following the presentations, various nonprofit and government partners sought additional information on children's health issues related to toxic contaminants. The community partners, previously unaware of existing governmental websites containing valuable information on disease incidence, health consequences, and potential solutions, were able to research these issues more thoroughly in order to benefit their clientele. In addition, one partner will now be working with the university through a service-learning based class to educate citizens with young children on the dangers of lead exposure.

The university also participated in organizing and hosting focus groups on the environmental issues identified in the first round of prioritization. These focus groups were open to the public and were attended by concerned citizens, (federal) government representatives, and faculty and library representatives from the university, as well as other partners.

Three sets of focus groups on the twelve environmental health issues that emerged from partner discussions were conducted over a one-week period. Each session contained four separate but similar issues (e.g., asthma, secondhand smoke, cancer, and heart disease), grouped together to facilitate productive discussions of causes, consequences, and solutions. Discussion times were organized to accommodate the busy schedules of partners and community members, taking place in the early afternoon, late afternoon, and in the evening. To limit the demands on partners' time, each issue received approximately 30 minutes for discussion, and each session lasted approximately 2–3 hours. By focusing on a limited number of related issues the focus groups tapped local and partner expertise and revealed more completely the vision for future action.

These discussions also served to hone the partners' skills in consensus-building. Consensus-building and dispute resolution is an ongoing process. It is one of the more challenging elements of collaborative problem solving because it requires participants to separate their interests from their emotions (Fisher and Ury 1991). A CARE partner's interest would be to support initiatives that reduce the effects of toxic contaminants in the larger community but emotion might sway a partner to protect their self-interest or the interest of their organization. So, for example, if an organization focused on reducing lead exposure in the community it might lobby to place this issue on the top of the priority list, thus guaranteeing the partnership's efforts to obtain resources to address this issue. However, while reducing lead exposure is an important issue, it may not be the most or among the most important issues facing community members. Separating emotions from interests reduces conflict and facilitates the consensus-building process.

Consensus-building also requires participants to voluntarily commit to finding common ground. In searching for mutual gains the participants will often find that compromise is required, and in the face of such a challenge relationships are created that previously did not exist. This then enhances the group's problem-solving capacity

and assists in the development of leadership skills. For some groups, the process of dispute resolution will be guided solely by stakeholder members, but for others more formal means such as mediation may be required.

The process of consensus-building was formally guided by two paid professional staff members with expertise in the areas of environmental health (Ph.D.) and public affairs (M.P.A). The project coordinator's efforts focused on developing a local health impact study and a guiding the partners in the process of creating a local action plan. This individual technical expertise in the area of environmental health, as well as her work experience as a consultant and a professor, uniquely positioned her to use formal methods of consensus-building, such as guided discussions on specific health-based issues like asthma. The project also employed a community health educator/facilitator responsible not only for organizing partnership meetings, but also documenting meeting progress and conducting public outreach. Her role as a community educator was critical to obtaining a broader community consensus on the issues of concern.

While administrative staff assumed the formal role of CARE facilitators, the university's role in consensus-building and leadership development was informal. If meeting dialogue required the use of dispute resolution techniques, a faculty member trained in dispute resolution attempted to clarify interests, separate emotions, and identify common goals. However, this role was voluntary and not one assumed in every circumstance where disagreement was evident. It is, in fact, with some trepidation that university faculty engaged in this task, seeking to remain in the position of equal partner as opposed to assuming a position of perceived leadership.

Contentious discussions that continued to focus on emotions, however, were ripe for meditative efforts. In one instance, a discussion regarding the selection of issue-prioritizing methods appeared fraught with emotional attachments to environmental issues and not methods of assessment. This discussion continued for more than one-half of the partnership meeting. It was at this point that the faculty member determined that a clarification of the group interest (collected agreement on prioritizing methods) could be separated from issues (turf protection) and intervened in the discussion. Balancing the use of critical skills with the need to remain as an equal partner can be difficult. Titles such as Professor can lend themselves to unwanted roles. Knowing when to employ your skills to facilitate collaborative decision-making process is an art rather than a science in this context.

It also should be noted that the university assisted in the training and professional development of the CARE facilitator. The facilitator was a recent graduate of the IUN masters program in public environmental affairs. Preparing students to assume effective leadership roles in the local community is a priority for the university and one which was successfully accomplished in the context of the CARE project.

Multi-stakeholder partnerships and leveraging of resources

Partnerships are the cornerstone of the CPS approach. These relationships serve two important purposes. First, they form a core group of actors committed to furthering an

objective (e.g., improving the quality of a community's environment). Secondly, they are a symbol of collaboration to the community as a whole. In marginalized communities, successful collaborations are rare and therefore positive symbols of collaboration just as valuable as leverage resources. This is not a simple task. Successful partnerships require critical investments of time and energy. They must have a set of clearly defined goals and possess some organizational capacity. Among their members there must be a set of leadership skills, and expertise, and finally financial resources are required before action can be taken (USEPA 2008).

Relationship building has been a focus of the university as a CARE partner. A dialogue has been established with partners in two ways. First, the university representatives are engaging in informal discussions with partners sharing data, information resources, and ideas. These discussions take the form of email communications, telephone conversations, and personal meetings. These forms of engagement contribute to building trust among the partners and assist in ameliorating misperceptions of the university's role in the community and/or in CARE.

As mentioned earlier, one common misperception is that the university would serve primarily as a source and provider of information. While this is one important role for local universities to play in a partnership, universities must also be seen as viable members of the community, impacted by and sharing in the struggles of urban life. Correcting the misperception that faculty and students seek to separate themselves from the larger community is a difficult but gradual process for which are now seeing more significant benefits. Currently, for example, partners are initiating conversations and reaching out to the university for advice on a broader set of issues, such a project design. Previously, most of the initial contacts originated when the university sought community partners for service-learning and other project-based initiatives.

To enhance community understanding of the university's willingness to partner, the author created a service-learning opportunity in a recent (Fall 2009) graduate capstone class. The Capstone in Public and Environmental Affairs is the final class in the graduate MPA course sequence. All students completing their MPA are required to take this class that focuses on the issue of local sustainable development. Approximately 18 students engaged in applied research and service using the knowledge and skills acquired throughout their MPA program to research, envision, and ultimately propose viable actions as next steps for the CARE partnership. Select partners and the graduate student teams worked together to define practicable solutions to the problems of vehicular emissions, lead, mold, and second-hand smoke as well as to identify useful steps to improve the environmental health of local school facilities. At the end of the semester all CARE partners were invited to campus to engage in a dialogue with students regarding their findings. Student reports are now being supplied to the CARE partnership and are being used to further refine the development of the local action plan.

Constructive engagement by relevant stakeholders

Constructive engagement by relevant stakeholders requires that a set of relevant non-community stakeholders be identified, and subsequently engaged and committed to long-term change. Typically these stakeholders come from academia, industry, civic organizations, and government. Stakeholder roles may differ in each situation, but generally speaking each set of stakeholders brings a set of interests and skills that are critical to the collaboration decision-making process.

Government agencies, for example, typically assume the role of convener, provide technical and financial assistance, and bring attention to the issues via enforcement actions or public outreach. In the CARE project, the City of Gary, as the CARE grant recipient, played the role of convener. As the grant recipient they also provided small stipends to stakeholders willing to commit to sustained engagement over the course of the grant. Public outreach efforts conducted by the city included the development of a CARE project website and the filming of CARE project meetings for broadcast on public TV.

IUN's role in promoting constructive engagement was multifaceted. University partners actively advertised and promoted CARE monthly meetings in other venues. Students, both graduate and undergraduate, were encouraged to attend these meetings voluntarily or were required to attend to fulfill course requirements. The university's contribution expanded the participation of affected and interested citizens not only during the academic year but also during the course of the project. A few students, for example, remain committed to attending CARE meetings despite being released from course requirements.

It is worth noting that a constructive engagement approach can reduce community tensions and encourage dialogue. Corporations in urban environments often see themselves as targets of citizen discontent but under this approach, these stakeholders are given a voice. Under the CPS model corporations, as recognized stakeholders, can provide valuable information to the partners regarding industry practices and simultaneously break down commonly held misperceptions regarding corporate environmental practices. On more than one occasion, industry partners representing steel manufacturers and water companies provided information to the partners regarding pollution reduction practices that were previously unknown or misunderstood.

Finally, the process of constructive engagement was and is ongoing. Member partners have changed over time, but a core group consisting of a minimum of twenty partners remains, including representatives from industry (steel manufacturer, water company), civic organizations (youth groups and other nonprofits), government (city, state, and federal), and academia (IUN).

Sound management and implementation

The challenge of sound management lies in the limited resources available to stakeholders. Each stakeholder must meet the demands of their respective organizations and find additional resources to engage in a long-term collaborative effort. It is, therefore, often not reasonable to expect significant time commitments from stakeholders when it comes to management tasks. Nevertheless, some stakeholders are better equipped to assist in this task, namely academic and government organizations. These stakeholder organizations often employ individuals experienced in strategic planning including goal setting, outcome development, and in project design and implementation. They also may have leadership and management development centers with valuable training initiatives.

The CARE project benefits greatly from the management skills of two professionals. Over the course of the last two years, the facilitator/community educator and the project coordinator planned and coordinated monthly meetings and public outreach sessions, and provided significant technical information and advice.

The grant recently ended (December 2009) and the task of management and implementation will now fall to the partners. The partnership appears capable of carrying out these tasks based on the knowledge, skills, and strengths they have developed over the last two years. First, the partnership has grown and now includes a more comprehensive list of representatives from government (city, state and federal), nonprofit agencies, community activists, concerned citizens, the university, and business. Having more than twenty diverse and committed partners should ensure that meetings will be well attended and a wide variety of views will continue to be represented. In addition, the partners have now developed and practiced negotiating skills central to successful collaborative decision-making processes. This is an important point. Successful collaborative decision-making skills promote decisive action, reduce conflict and stalemates, and promote long-term visioning processes. The first evidence of the successful application of these skills was the creation of a volunteer steering committee charged with many of the same responsibilities previously administered by the paid community educator/facilitator and project coordinator. The steering committee, representative of varied partner interests, will coordinate and plan meeting times and agendas and assist in the preparation of a CARE Phase II grant application.

Challenges do remain. The partners were successful in ranking and prioritizing future actions but much will depend on their success in identifying funding sources for administrative tasks and project activities. Funding would resume should the project be awarded Level 2 funds, but these funds will not be available until 2012. Therefore, the upcoming year will test the strength of the partnership and likely result in a renegotiation of roles and responsibilities. The university is currently identifying ways to assist in this endeavor, including expanding service-learning projects.

Evaluation, lessons learned, and replication of best practices

Evaluation is a bridge to the future. By assessing how well a project is working and identifying strengths and weaknesses, the seventh step in the CPS moves the collaborative process forward. Strengths can be built upon and weaknesses corrected through the systematic assessment of the work performed to date. The CPS process calls for continuous evaluation in order to facilitate the development of effective practices and identify those that require modification. Assessment requires the development of measures of success or indicators for gauging performance (USEPA 2008). Successes, once identified, can then be shared with others as best practices. The project benefits can now be shared with other community partnerships, providing new tools for advancing sustainable development initiatives.

As the project nears the completion of its Level 1 activities, the stage is set for evaluation. Now, an opportunity exists for blending the collaborative problem solving approach with the university's third prong—research. The author is currently developing a survey instrument that will be administered to project partners to assess their perceptions of CPS, including their view of university participation in the CARE project.

The first objective of the university in conducting the survey is to assist the CARE project in completing the evaluation process and identify lessons learned. The process of continuous assessment requires that partners assess the strengths and weaknesses of the collaborative process. To this end, the survey will solicit partners' perceptions of each of the elements employed in the CPS model. Not only will their opinions be obtained regarding the implementation of, for example, the issue identification element, but they will also be asked to identify the relative importance of the seven elements of the CPS process.

The second objective of administering the survey instrument is to collect and analyze the opinions and views of partners regarding the existing community-university relationship. Community perceptions of the nature of the relationship, the scope of the relationship, and the perceived length of the relationship will be important to the university's process of self-reflection. We will collect this information to determine the community's view of the university's level of partnership participation. Will the university be perceived to follow the entrepreneurial model, the engagement model, the venture model, the civic engagement model, or some alternative, yet unidentified model of partnership?

While preparing the final survey instrument and waiting for the project to officially complete its formal tasks, the university is assisting in the administration of a CARE Project leadership survey of institutional capacity. While the university did not participate in the design of the survey, we are serving as a neutral party to whom survey responses are sent. We will enter the data and prepare a summary report for the project administrators to share with CARE partners. In the short period of two weeks, the university has received almost thirty responses from CARE partners, indicating not only that the partners trust the university with this task, but also that interest in assessing the administrative process is strong.

Lessons Learned

The collaborative problem solving model serves as a viable and important model for community-university partnerships. While this model was originally conceived as a means to assist communities disproportionately impacted by environmental harms, it also can serve to advance collaborative efforts in any number of areas of public concern, such as health care, criminal justice and community safety, environmental contamination, and economic development. The elements of the model can be translated and implemented across issues, and are relevant in any community focused on building processes and not simply achieving outcomes.

In this section, the advantages realized from the university's participation in the CARE project are identified and discussed. Participating in projects employing the CPS model provides university partners with the opportunity to engage in a long-term, ongoing process of self-reflection and transformation in teaching, research, and service-based activities. Self-reflection under CPS will take many different forms. Specifically, universities will be forced to examine two academic factors that have been identified as significant obstacles to community collaboration: (1) university incentive systems and (2) professors' political inexperience (Cortes 1998). Transformation will occur when the university acts to change more traditional incentive-based systems to systems reflective of the values embodied in the Boyer model. Faculty will also need to engage in a transformative process, participating in and appreciating the significance of political processes in the dissemination of knowledge for the betterment of the community.

CPS Model Provides an Opportunity to Review University Incentive Systems

CPS engagement is considerably more time-consuming than many other forms of community-university partnership. Developing trust and securing an equal role in the decision-making processes needed to move the community toward sustainable development only occurs with consistent and active involvement of faculty and students.

University incentive systems do not typically reward faculty for such involvement. Failing this support, faculty will be less likely to participate in collaborative decision-making processes. This limits the university's role in the community and feeds the community's perception of the university as an isolated organization contained within the community, focused on providing information and knowledge. Universities must ask if their reward system supports participation in collaborative decision-making processes and determine if changes need to be made.

CPS Model Enriches the Skill Set of Faculty and Students

University faculty and students traditionally have supplied communities with critical sets of information and knowledge needed to solve pressing environmental policy challenges. In the past, community-university partnerships involved unequal partners interacting to address specific community needs. Outcome- rather than process-based

transactions limited the university partners' exposure to the cultural and political realities faced by community members.

Collaborative problem solving requires a new set of skills. Faculty and students involved in CPS must first immerse themselves in the task of understanding the role that political relationships play in defining sustainable development and addressing real-world environmental problems. Technical solutions are often constrained by political realities, including the short-run perspectives of political actors and the actors' limited ability or willingness to address more complex and controversial policy concerns, such as sustainable development.

Once isolated from these concerns, faculty engaged in the CPS process find themselves involved and influential in affecting political change. Faculties, equipped as experts in specific disciplines, are often unprepared and perhaps somewhat unwilling to engage in these discussions. However, a long-term commitment to community-university partnerships under CPS will require faculty and involved students to challenge their perceptions of their roles in civic engagement and to develop skills in the less familiar areas of facilitation, negotiation, and effective decision-making. While political expertise may not be a strength of faculty members, gaining experience under a system that values the creation of shared interests is much less burdensome than striking out on your own. It is also more valuable to communities, which will then have partners who can explain and advocate for particular technical solutions, if appropriate.

Conclusion

In this paper the CPS model of community-university partnership is presented and discussed in the context of an EPA CARE project addressing an important urban environmental policy issue, namely the exposure of a city's population to toxic contaminants. Examining this application of the CPS model is valuable to academia, practitioners, and the community. From this study, current and future partners in community-university partnerships can gain insights into the strengths and weaknesses of the CPS model of engagement.

A major strength of the CPS model is its focus on long-term engagement. Committing to long-term engagement is consistent with the new view of community planning (i.e., sustainable development) and consistent with the international move to develop universities supportive of sustainable development initiatives. Therefore, universities interested in pursuing sustainable development initiatives will find the model useful for visioning and strategic planning purposes. The city/community will also benefit. As an "organ for expressing and actualizing the new human personality" the city, under the CPS model, finds tools to capture the "will of the citizens" (Mumford 1961).

A weakness of the model is its organic nature. Partners come to the table with preconceived notions regarding roles and interests and a limited set of skills necessary for negotiating cultural, political, and economic differences. At some points partners may find themselves unable or unwilling to move forward. Negotiating the next steps

may appear nearly impossible. However, organically moving forward from those points using the skills of the partners at the table is an important part of the collaborative decision-making process. Learning how to move beyond perceived barriers develops the skills needed to address process challenges and facilitates problem identification, capacity building, implementation, and ultimately project evaluation.

Through this experience, the university partners have a better appreciation of our part in an integrated system, as is envisioned under the principles of sustainable development. That role will evolve and change, as will the environment that we share with the community, as even the “smallest neighborhood or precinct must be planned as a working model of the larger world” (Mumford 1961).

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