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Dickinson, ND

Convening Report

By

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1. Introduction

Higher oil prices have caused rapid development in the Bakken oil field, centered in western North Dakota, leading to economic, social and environmental challenges. In the context of these challenges, the Bakken Researchers’ Convening was hosted by the Strom Center of Dickinson State University, May 18-19, 2015. The purpose of the meeting was to highlight completed and ongoing research in the Bakken and improve future communication among researchers to better address the interdisciplinary problems faced by communities in the Bakken moving forward. The purpose of this report is to evaluate the discussion of the challenges surrounding, funding, data resources, field work, and research gaps and dissemination, to reveal areas for further collaboration and to set the stage for a conference that addresses the challenges, and opportunities, of the Bakken. Major themes from the meeting included the need for collaboration to pursue larger funding opportunities and to streamline surveying in the region to combat research fatigue. A general consensus emerged that the group should establish a clearinghouse for applicable research and reconvene for a conference in about a year to disseminate applied results to stakeholders in the region, rather than targeting an academic audience.

The convening was sponsored by the USDA, the North Dakota Department of Commerce, NDSU, the North Dakota Consensus Council, and the Strom Center at Dickinson State University. A list of attendees can be found in Appendix A. Attendees came from all over the region, from academics at universities in North Dakota, South Dakota, Montana and Minnesota and regional stakeholders and government agencies. The agenda can be found in Appendix B.

The convening used ThinkTank 4 by GroupSystems to collate the thoughts and ideas of the participant researchers. ThinkTank is a brainstorming program that can relay the thoughts of a multitude of researchers simultaneously using computer interfaces. This allows multiple opinions...
to be shared at once, without the confusion that this would create in a verbally focused setting. It also allowed individuals who were not able to physically attend to participate in the discussion. The ThinkTank output from this convening can be viewed in Appendix C.

This report summarizes the ThinkTank output generated from the meeting to ultimately encourage relevant research that addresses the challenges faced by communities in the Bakken region in an interdisciplinary manner that focuses on both academic and extension outputs. The convening was organized around six major themes: funding, data resources, field work, research needs, research dissemination and a future public research and extension conference. This report continues with a discussion of the challenges in the Bakken region, followed by a summary of the major themes of the conference and a conclusion.

2. The Bakken

The Bakken Oil field has changed the landscape of the western quarter of North Dakota, giving rise to a number of difficult economic, social, political, environmental and biophysical challenges that have global and local significance. The Bakken is the 10th global super-giant oil field to produce more than 1 million barrels of oil per day, with total recoverable estimates starting at 20 billion barrels of oil. This represents potentially more than 50 years of future oil production in the region.

Like many boom communities, the major centers in the Bakken region have experienced rapid population growth to service the oil industry. For example, the town of Dickinson, ND, has nearly doubled in size, from 16,000 to 28,000, in the last five years. This has had corresponding impacts on the people living in the area and those arriving. A number of important research
challenges have been identified by those working in the region. These challenges emphasize the importance of ensuring that research in the region targets the needs of stakeholders in the Bakken.

The challenges in the Bakken were placed into 7 major categories by the convening organization team to streamline the discussion. The population and migration flows of the individuals entering and leaving the Bakken are of particular interest. The labor market in the area is particularly challenging, as a lack of labor availability has affected the community. Higher incomes and increased wealth, for some individuals, have changed the outlook of the community, but also resulted in a new disparity in quality of life and affordability for basic needs. Housing and construction have lagged behind the demand of a richer, less educated community of domestic and foreign immigrants. Oil businesses have boomed, but the businesses that once existed in the area face heavy competition from oil companies. New workers and a lack of services have altered crime and domestic issues. Biophysical changes to the environment have created a host of social scientific factors to consider. Native American communities have experienced these challenges as well.

3. Funding

The first session of the conference involved discussions of funding opportunities, challenges and methods to overcome these challenges. The first topic of discussion focused on the question: “What funding resources, including non-profit organizations and foundations and governmental groups are or may be interested in funding research on the economic and community impact of the Bakken?” A number of important funding sources emerged from the discussion, including
federal government sources (NSF, USDA, NIH, NEH, HUD, Dept. of Energy), state agencies, universities, foundations (Bush, Bremer, Ford, Doris Duke), North Central Regional Center for Rural Development, and local and state Humanities Councils. Bush Foundation funding was won by Vision West and the North Dakota Energy Project, but was perceived to be challenging to access by other researchers and has changed priorities. Other government grants, such as USDA-NIFA were available, but required partnering with land grant institutions. Participants recognized a general trend of decreased federal research dollar availability. However, multi-institution grant proposals were seen to have advantages in acquiring these larger pots of federal money.

Other challenges also arose, addressing the topic question: “What challenges have you faced in securing funding for research projects?” Gilbertz identified community involvement buy-in as a challenge, which is often necessary to get funding. Others identified the importance of getting to know the potential community you wish to work in, which can be time consuming. With limited sources of funding, competition is becoming more important in funding – also raising the possibility of only perceived competition, where winning certain pots of money is potentially ‘rigged’ (Jacquet). Muske identified timing problems and Bangsund forwarded that proposal writing could be a full-time job – but one that favors those with grant writing skill (Jacquet). Doherty identified an overt focus on applied research, leaving little specific space for theoretical work in grant proposals. Some grants are too narrow (S. Braun) others are too large and require too much coordination, such as in the case of the NSF (Fitzgerald). Large grants feed back into the time problem both in acquiring them and then administering them throughout. The speed of the grant process is also problematic for time-sensitive topics (Doherty). Other problems arise at the university level, where indirect costs and funding match make it challenging to have any money left over to actually do the research.
The final topic in the funding section gathered responses to the question: “How have you overcome funding challenges?” Some of the answers to these questions were addressed in the previous section. Regarding competitive funding, some grants just had to be ignored – so targeting the correct grants became an important time and resource saving strategy. Building coalitions, teamwork, collaboration, all arose as methods to acquire funding. Building relationships with industry and government to help send funding in your direction is also important (Fitzgerald). Time saving initiatives, including pre-done literature reviews (Fitzgerald), previous research (Ripplinger) and pre-filled forms can also save time in the application process. Course release was forwarded as a method to get more research time (S. Braun). Undergraduate and graduate resources were also highlighted, as well as many suggestions trending toward a workaholic lifestyle. Wealthy alums funding various initiative was also suggested, if possible (Flynn). Deb Nelson noted that several federal and state agencies and private funding sources are familiar with the Vision West ND plan and that collaborating with Vision West on related priorities could lead to an endorsement through Vision West’s endorsement process and provide access to the organization’s consortium. Connecting research to planners and local communities by providing accessible summaries, graphics and marketing the report were discussed as ways to make a grant application more attractive.

The funding session discussed opportunities, challenges and solutions to challenges in the Bakken Region and research in general. Collaboration and teamwork represented both challenges and opportunities for funding. The Bakken Researchers Convening was very helpful to the collaboration process and laid the groundwork for solutions to this problem.

4. Data Resources
The second session in the Bakken Researchers Convening dealt with current data resources related to the region. The first topic was: “What data resources have you used or plan to use as part of your projects?” The data discussion was broken down into the broad categories of discussion mentioned previously. Various large scale sources of government data, such as the census and the IRS, and their limitations were discussed in each of the categories. In the case of population and migration some interesting potential data sets were mentioned, including cell phone ping data to track migration, and landfill, water and sewage flows (municipal data) to track population. Cell phone ping data was perceived to be expensive and municipal data can be more difficult to access than large scale data sets. Photography, cell phone applications and GIS portals were also mentioned. As a general trend, North Dakota hasn’t generally prescribed to the need for data, until recently, due to a lack of growth, and troubles with that strategy are now becoming apparent in the Bakken (Hodur).

Regarding money and labor markets, large government databases and banking information were identified, such as deposit levels at local banks. Job listings in newspapers and online were also discussed.

For housing and construction, landsat images over time were mentioned, along with Google street view. Interviews with builders, building stores, real estate agents, and contractors were suggested. Municipal building permits were identified as potential sources, but sorting through the data is a time consuming process (Hodur) and not all permits are built, particularly on the non-traditional side (Bangsund).

In the case of income and wealth, government sources and banking sources were mentioned. Barkey identified that many of the federal information sources are at risk due to congressional decision making.
Data on sociological factors included government sources and primary research. Aalgaard Kelly, Lum and Legerski have collected sociological data in the area or are in the process of obtaining it. Sharing this data was suggested, with the caveat that IRB processes do not always allow such actions.

Other data sources were mentioned, or reiterated, including spatial data, newspapers and state specific sources. Hodur highlighted that primary data is key, since secondary is typically not readily available, during times of rapid change.

The second section of the Data Resources sessions addressed two questions: “What data resources would be helpful that are currently not available? How could we get these data?” Well site data was sought, but deemed very difficult to obtain. Rental occupancy rates were mentioned, through a survey process. Better assessments of recoverable oil, other current data, public opinion, and money transfers were also sought. New data resources were determined to be primarily gained through further research and sharing amongst various stakeholders in the region.

5. Field Work

The third session of the Bakken Researchers Convening attempted to discern the current state of field work in the region. The group was asked: “What surveys have participants fielded in the Bakken as part of their research? In the comments field for each survey, what challenges have you faced in fielding the survey?” The general challenge identified by researchers involved survey fatigue. Many researchers report difficulty soliciting participants and meeting the needs of the diverse population, regarding their availability. Regarding interviews, S. Braun reported
four years of ethnographic fieldwork, working with Native American tribes. Both Jacquet and Aalgaard Kelly had interviews planned for May/June 2015 on housing problems and solutions, with different regional focuses. B. Braun has done oral histories with migrant workers and long term residents with the ND historical Society. Legerski had completed semi-structured qualitative interviews on the perceptions of changes in the region. Fernando had conducted 210 interviews covering quality of live, values and attitudes, community development, and housing in Western ND. Hodur conducted interviews with business, industry and community leaders as part of a workforce assessment.

In terms of surveys, Fernando had conducted two on quality of life and place conceptions and attitudes toward the boom. Bangsund and Hodur have surveyed industry including an online questionnaire. Doherty has done interviews with his students. Fernando has also conducted five focus groups in the region, but cited problems with finding convenient times to build a focus group.

The second question in this section was: “Which groups or individuals have been most affected by/pursued by researchers?” Fernando identified longtime residents and oil workers as particularly sought after and fatigued populations. Legerski identified service providers, specifically criminal justice professionals, as overworked, with limited availability. County administrators also share this problem and eventually have to close their doors to get their primary responsibilities completed (Hodur). Anyone who has been portrayed in a negative light, or in black and white terms, has been heavily affected by researchers (S. Braun). Kilen and Nelson in their roles often have too many questions to answer. They identify the need for interviewers to be prepared and not request easily available public information (Kilen) and to be patient with response times (Nelson).
The final question in this session was: “Are there ways this group or other organization could help coordinate survey work and address issues regarding subject fatigue?” The Vision West ND Consortium was suggested as a coordination portal (Kilen), although the organization is quite busy (Nelson). The Mon Dak Developers were also suggested (Kilen). Within this Bakken Researchers Group, a FAQ was suggested as a potential tool to reduce repetitive questions in the field (Haggerty). Iverson also suggested that the group solicit a ‘Top 10’ research needs from various government and non-government agencies to fit research to the perceived needs of those invested in the community. This would also reveal potential funding opportunities.

6. Research Needs

The fourth session of the Bakken Researchers Convening examined research needs, or gaps, and potential collaborations. This section was also broken down into the topic areas in the preceding introduction and data resources sections. The session began with the question: “From an academic perspective, what important research questions regarding the economic and community impact of the Bakken energy boom should be investigated?” Regarding population and migration, understanding migration flows into and out of the Bakken was identified as an important need (Grunewald). More specifically: Where do people come from? Is there migration within the Bakken? S. Braun identified the difficulties involved in long-term decision making when it is unclear which individuals will stay in the region (Fernando; Bangsund). DeWaard stressed the importance of considering even those currently viewed as likely to leave the Bakken. The need to understand the difference between employment-based migration and quality-of-life based migration is also important (Fernando). The needs of international workers have been less well considered (Legerski; Doherty). Hodur identified a “culture of resignation and acceptance in
ND”, where people tend to be ambivalent. What role has this had on developmental planning?

Intrastate migration issues were also raised (Nelson).

Research needs surrounding housing and construction began with questions of the housing stock in general (Lum). Moving to greater specificity: Where are the houses located relative to work sites for commuter considerations? What type of, and how much, housing is needed (Nelson)? What is the long-term impact of potentially poor housing quality (Kilen)? How does geographic dislocation affect families (Aalgaard Kelly)?

In the context of labor markets, Doherty identified the impact of J-1 Visas. Ripplinger identified a series of wage issues over time, related to oil prices. Building on wages, Nelson identified problems with wages in secondary industries and Grunewald cited wage issues forcing non-energy related manufacturers to leave the area or expand elsewhere. More currently, Haggerty identified the effects of layoffs in the Bakken on other parts of North Dakota. B. Braun was interested to know if workers who had come to the Bakken for wages and then departed had achieved their financial goals.

Building on labor markets, income and wealth issues included potential negative impacts of accumulating wealth (S. Braun), including the differential distributions of it. Has royalty collection impacted philanthropy and community involvement (Bangsund)? Where is the wealth going – is it being invested in the Bakken (S. Braun)? There was also a debate about affordable housing, where definitions of affordability were skewed by high incomes.

Regarding business challenges, the issue of changing business composition was raised (Grunewald). Succession planning was identified (Kilen). Business sustainability was also highlighted (S. Braun), as was industrial diversification (Bangsund).
Research needs regarding sociological factors included workplace safety, due to high fatality rates in certain sectors (B. Braun). Mental health support needs were also highlighted, along with bio-psycho-social factors (Aalgaard Kelly).

Public policy research needs were also raised. Environmental justice and environmental degradation gaps were also identified. A host of indigenous community issues were identified that interlaced all of the mentioned research needs and gaps, including jurisdictional issues (Legerski), social concerns, emergency preparedness and responsiveness, policing and crime issues, and mobility in and out of communities (Lone Fight). There was also discussion on ways to educate researchers on how to work with indigenous communities on research projects, especially on developing relationships with community leaders regarding potential projects. S. Braun also raised a series of important questions: “Is what is happening in the Bakken actually good for the region? Should it happen? How will what is happening now affect the community 50 years from now?”

7. Researcher Communication and Research Dissemination

The fifth session of the convening dealt with research dissemination issues. The first question was: “What information would researchers find helpful to share across the group?” The simple answer to this question was everything that you are doing or interested in doing in the Bakken (S. Braun). This included news, conferences, papers, data, contacts, assistance, syllabi, funding opportunities, including calls for proposals, field work issues such as timing and content of surveys, previous research and current research. Communication could help facilitate collaboration among researchers regarding potential funding opportunities early in the proposal
process. Facilitation of this sharing could go through the Strom Center or a public wiki (DeWaard). Jacquet and Aalgaard were also developing a website for a similar purpose that could be used to share ideas. These ideas answered the second and third questions: “What mechanism would work best to share that information? How do you currently share your research?” Other sharing ideas included a listserv, newsletter service, conference presentations, peer reviewed journal articles, research reports, an interdisciplinary volume or journal on Bakken issues, and internet applications. Grunewald thought it important to distinguish between clearinghouses of information and contemporary news services.

The final question in this session was: “Your research is valued to local communities. What barriers exist to sharing research? How do we overcome those barriers?” Time, resources, coordination, formatting, academic institutions, a lack of contacts, a lack of interest in ‘academic’ research, the role of extension and the specificity of certain research results were all mentioned as potential barriers. Overcoming those barriers involved working amongst the community to get relevant contacts and build trust (S. Braun) and accessing existing resources more effectively and efficiently (Kilen). Finding ways to disseminate research reports beyond direct stakeholders were also highlighted (Doherty).

8. Research Conference

The sixth and final session of the Bakken Researchers Convening dealt with planning a potential research and dissemination conference. The session aimed to answer the following questions: “What should be the goals of a public research conference? What should be the scope? Who should be the audience? Where should it be located? How should it be organized?” After some
debate, the main goals of the research conference were focused toward communicating results
effectively to local and state decision makers (Ripplinger). An academic focus was mostly
deterred, but the possibility of an academic track and a non-academic track was discussed.
Therefore, the target audiences considered were stakeholders in the Bakken, such as members of
the community, leaders, decision makers, public policy makers and investors (Hodur). Therefore,
it made the most sense to hold the conference in the Bakken, possibly in Dickinson, ND, at
Dickinson State University.

Regarding the scope of the conference, it was identified to be primarily dependent upon the
target audience. Potential formats included panel discussions with community leaders and
academics (Kilen), roundtables and workshops (S. Braun). The scope would also potentially
depend upon the interest received by a call for papers (Ripplinger). Nelson suggested that
“perhaps we might look at two different conferences by topic. One could be the socio-economic
studies and impacts. One could be the environmental and royalty issue concerns of the
landowners.” Energy industry representatives may have interest and might provide funding
(Lum); they have corporate responsibility goals and can be good sources of sponsorship (Hodur).

In terms of recruiting a keynote speaker, ideas included a noted industry figure, Chair of the
Federal Reserve, or President of the Minneapolis Fed, Richard Stedman, N.D. Gov. Dalrymple
or N.D. Sen. Heitkamp. A bus tour of the facilities, including a refinery, load out station, walking
rig, crew camp, etc., could be offered for conference participants (Kilen).

There was some discussion about inviting researchers doing work in other shale areas in the
country. Deb Nelson noted that Vision West has connections with the Penn State Shale Center
and the National Association of Counties.
In a vote, it was determined that the preferred date for a conference would be spring of 2016, or possibly later. Two working groups were proposed, one on researcher communication and research dissemination, and the other on research conference planning. Kilen was nominated to lead the researcher communication and research dissemination working group and Grunewald was nominated as the lead on the conference organization working group. Jacquet volunteered to participate in one of the groups.

9. Conclusion

The purpose of the Bakken Researchers Convening was to highlight research in the region and create synergies between different disciplinary researchers to better address the interdisciplinary problems faced by the communities. Through discussions of funding, data resources, field work, and research needs and dissemination, it was ultimately decided that moving forward with a conference focused on serving the needs of community stakeholders, held in the region, in Spring 2016, would be the best course of action moving forward. The convening set the stage for fruitful collaboration between Bakken researchers that will hopefully blossom into feasible solutions to population and migration, labor market, income and wealth, housing and construction, business, crime and domestic, and environmental problems in the coming years.