

CCS AND COMMUNITY ENGAGEMENT

WRI



Acknowledgments

This publication is the collective product of a carbon dioxide capture and storage (CCS) stakeholder process convened by the World Resources Institute (WRI) between April 2009 and October 2010. The unique perspectives and expertise that each participant brought to the process were invaluable to ensuring the development of a robust and broadly accepted set of community engagement guidelines for CCS. In addition to the insights provided by the stakeholders, additional perspectives were added through the peer review.

We would like to thank each of the stakeholders (listed on the inside front cover of this report) for generously contributing their time and expertise to this effort, as well as the WRI peer reviewers (Phil Angell, Stephanie Hanson, Kirk Herbertson, Lalanath de Silva, and Jake Werksman) and the external peer reviewers (Peta Ashworth, Albane Gaspard, Andrew Gilder, Krist Hetland, Kai Lima, Tezza Napitupulu, Willy Ritch, Ethan Schutt, Walter Simpson, Tony SurrIDGE, and Catherine Trinh) for their thoughtful review of the document prior to publication.

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Lastly, but importantly, WRI would like to thank Robertson Foundation, Energy Foundation, and United Kingdom Foreign and Commonwealth Office for their financial support.

Disclaimer

This report was designed to provide guidance to CCS project developers, regulators, and local communities as they engage in discussions regarding potential CCS projects. The report has been developed through a diverse multistakeholder consultative process involving representatives from business, nongovernmental organizations, government, academia, local economic development bodies, and other backgrounds. While WRI encourages the use of the information in this report, its application and the preparation and publication of documents based on it are the full responsibility of its users. Neither WRI nor the individuals who contributed to the report assume responsibility for any consequences or damages resulting directly or indirectly from their use and application.

The Guidelines reflect the collective agreement of the contributing stakeholders, who offered strategic insights, provided extensive comments on multiple iterations of draft guidelines and technical guidance, and participated in several workshops and conference calls. The authors and editors strived to incorporate these sometimes diverse views. In so doing, they weighed conflicting comments to develop guidelines that best reflect the views of the group as a whole, and acknowledged diverging opinions among stakeholders. Although the Guidelines reflect the collective input of the contributing stakeholders, individual stakeholders were not asked to endorse them. The identification of the individual stakeholders should not be interpreted as, and does not constitute, an endorsement of the Guidelines by any of the listed stakeholders or their organizations.



Guidelines for Community Engagement in Carbon Dioxide Capture, Transport, and Storage Projects

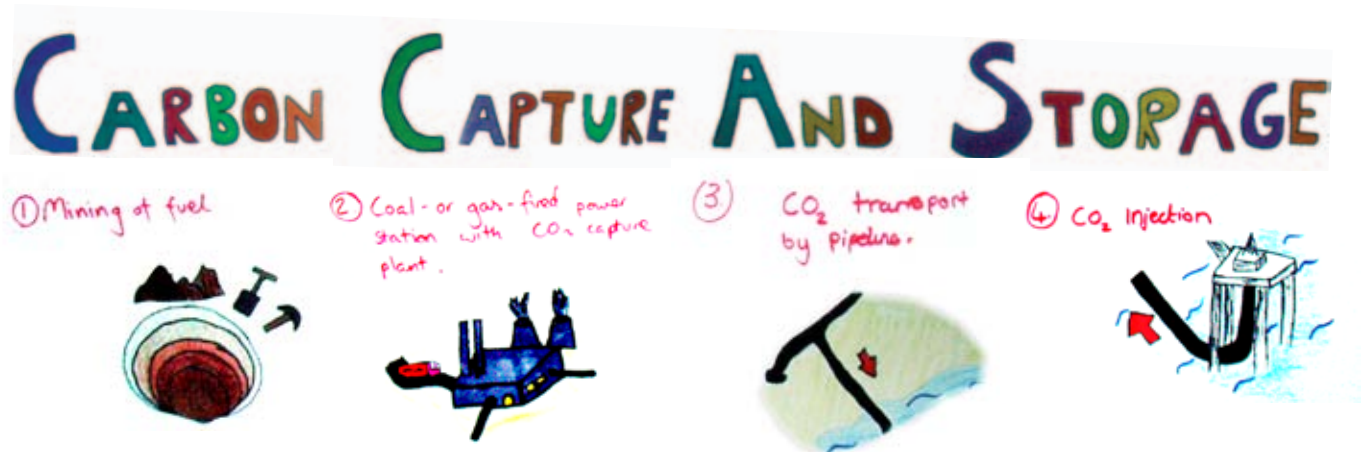
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Rendition of the CCS process chain by a student from Linlithgow Academy, Scotland (another student illustration is located on page 37).

There is no single quick fix or technological silver bullet that will reduce the greenhouse gas emissions that are altering the Earth's climate. Rather, a range of technologies and strategies will need to be employed to keep global temperature rise below the 2.7 degrees Fahrenheit danger threshold identified by scientists.

Some of these solutions (think energy efficiency or wind and solar power) are tried and tested, but need scaling up; others are emerging and not yet commercially available, but offer great potential. Carbon dioxide capture and storage or CCS falls into the latter group. A suite of technologies that together can be used to sequester carbon dioxide greenhouse gas emissions from power stations and other major industrial sources, CCS is now moving from demonstration projects to commercial scale pilots.

Most credible analyses project a key role for CCS as a bridging technology between today's fossil fuel-based global economy and the low carbon societies of tomorrow. To be effective in helping contain global emissions, however, CCS deployment would need to accelerate dramatically over the next three decades, which is where community engagement, the subject of this report, comes in.

As an emerging technology which involves injecting carbon dioxide into geologic formations, CCS has drawn wary reactions from some communities around the world where demonstration projects have been sited or proposed. Too often, the reaction from regulators, project developers and local authorities has been to view public opinion and local communities as a barrier to technology deployment. This report takes the opposite tack: it starts from the position that project developers and regulators should treat host communities as partners whose questions and concerns can improve the project and who should be consulted in the design, development and operation of CCS projects on their doorstep.

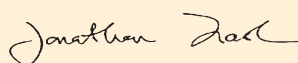
To be clear, this report does not aim to make a case for or against CCS. Instead, it outlines how local communities can help shape decisionmaking around CCS projects, and in so doing build wider public support for the emerging technology.

The report builds on WRI's previous consensus-building stakeholder effort, which resulted in the publication of the *Guidelines for Carbon Dioxide Capture, Transport, and Storage*, a technical guide for CCS projects. This complementary publication is the product of the collective experience and best thinking of more than 90 experts and stakeholders involved in CCS across the world, including academics, project developers, regulators, nongovernmental organizations and community groups.

The resulting conclusions are intended to serve as international guidelines for regulators, local decisionmakers (including community leaders, citizens, local advocacy groups, and landowners) and project developers as they plan and seek to implement CCS projects. The guidelines will be road tested with CCS projects in the field, and the experience gained integrated into a revised edition of globally-applicable best practices.

Whether CCS will be viable at commercial scale is yet to be proven. Without public buy-in, however, the chances are slim that the technology will be deployed at meaningful scales for climate change mitigation. Transparency and consultation are prerequisites for this buy-in.

WRI hopes this report will provide a basis for best practice engagement on CCS projects worldwide, which will help enable the public to judge the technology on its own merits.



Jonathan Lash

President, World Resources Institute

CCS COMMUNITY ENGAGEMENT GUIDELINES: OUR PROCESS

This World Resources Institute (WRI) report provides guidelines for local community engagement and public involvement in carbon dioxide capture and storage (CCS) projects. The report does not aim to make a case for or against CCS. Instead, it outlines how local communities, particularly those living or working near a potential carbon dioxide (CO₂) storage site, should be included alongside project developers and regulators as key parties in any proposed CCS project, and how such communities can proactively help shape engagement and decisionmaking processes.

The Guidelines is the product of a stakeholder process convened by WRI and is based on the participants' collective experience, as well as the latest developments in CCS research and deployment efforts. The Guidelines proposes how to effectively engage local communities during CCS project planning, development, operation, and long-term stewardship. The Guidelines will be road tested in real-life CCS projects, and the experience gained will be integrated into a revised edition of globally-applicable best practices for CCS projects.

Stakeholder Group: Contributors to the Guidelines have experience studying and practicing community engagement for CCS projects in different countries and provide a range of perspectives. The group includes academics, project developers, governance experts, representatives from utility and fossil energy companies, public servants involved in both policymaking and regulation, community representatives, scientists, and nongovernmental organization (NGO) representatives. Most contributors' names and organizational affiliations are listed on the inside front cover. Some stakeholders requested that their names be withheld, as they were not officially authorized to contribute by their respective organizations (notably regulators from governmental agencies involved with CCS). Such contributions were still fully considered and appreciated.

It is important to note, however, that it is challenging to create a perfectly balanced stakeholder group. In relation to CCS, particular difficulties included reflecting the voices of those so opposed to the technology that they would rather not join the discussion, and those who might only speak out if a CCS project were actually proposed in their specific communities. Finally, it is difficult to convene a geographically balanced set of stakeholders that would both enhance and inform the Guidelines. WRI's approach to dealing with these challenges was to introduce missing perspectives in a rigorous peer-review process that followed the stakeholder deliberations. The peer-review group included external experts both in support of and in opposition to CCS as a technology, leaders of local opposition to real CCS projects, and experts and public servants from countries currently considering CCS regulations and research endeavors.

Approach: The Guidelines avoids providing a step-by-step methodology for community engagement because each CCS project and community is unique and requires an engagement process tailored to suit site-specific needs.

The Guidelines primarily focuses on the aspects related to the CO₂ storage phase of CCS, such as very long time horizons, rights to subsurface usage, and the potential impacts on local communities from CO₂ injection, from both a technical and a socioeconomic perspective. This approach aims to shed light on some of the unique needs for public engagement on CCS, as the stakeholders found that engagement around capture and transport is generally similar to that which already occurs for other power, industrial, and infrastructure installations. However, all phases of a project will need to be taken into consideration as these principles are put into practice in communities. For example, the

source of CO₂ for a proposed storage project may significantly influence the way the project is perceived by the host community: a project that intends to build a new coal-fired power plant as the source of CO₂ may be viewed very differently by a community than a project that intends to retrofit an existing plant.

The Guidelines builds on WRI's previous 2-year consensus-building stakeholder effort, which resulted in the publication of the *Guidelines for Carbon Dioxide Capture, Transport, and Storage*, a technical guide for how to responsibly proceed with CCS projects.¹ Although this report includes a brief overview of CCS, readers should consult the technical guidelines for detailed information on CCS technology and its use. The guidelines presented here also draw on and adapt WRI's research on community engagement related to extractive industries in developing countries, which identified seven principles for effective community engagement:²

1. Prepare communities before engaging.
2. Determine what level of engagement is needed.
3. Integrate community engagement into each phase of the project cycle.
4. Include traditionally excluded stakeholders.
5. Gain free, prior, and informed consent.
6. Resolve community grievances through dialogue.
7. Promote participatory monitoring by local communities.

The stakeholders have made an effort to focus on general, transferable principles for community engagement and participation as opposed to focusing on any specific existing regulatory scheme.

Audience and Objective: Groups and parties that may be engaged in the decision-making process for CCS projects encompass governments, national environmental groups, various project developers, CCS researchers, and other stakeholders. However, this report focuses on local community engagement, with the *local community* defined as the collection of citizens of one or more towns/cities/counties living near a project who may potentially be directly affected by one or more of its components. Engagement with nonlocal parties, while also important, lies outside the scope of this effort.

The Guidelines provides practical recommendations for integrating local input and involvement into potential CCS projects. Communities not only have a right to be included, but their engagement is also important to the successful deployment of CCS as a climate mitigation strategy at a large scale. Experience has shown that insufficient community involvement can hinder CCS deployment. Not all proposed CCS projects will move forward, and many will be opposed by local communities for valid reasons. Thus, realizing the public-good potential of CCS-generated climate mitigation will require establishing trusting, respectful, and stable relationships among project developers, regulators, and local communities.

Because of the evolving debate and experience surrounding CCS and the unique nature of each local community and CCS project, the Guidelines stops short of defining a decisionmaking process to determine whether specific CCS projects should proceed. Instead, the Guidelines aims to strengthen the underlying process so that the community, developers, and regulators are all effectively represented in the decisionmaking.

Likewise, while the guidelines support the seven WRI engagement principles outlined above, they do not explicitly prescribe any binding dispute settlement procedures or formally endorse Free, Prior, and Informed Consent (FPIC) in a CCS context (see box on page 39). These decisions stem from the stakeholder process, and do not reflect a change in WRI's stance on governance issues.

EXECUTIVE SUMMARY

CCS and Climate Change Mitigation

Carbon dioxide capture and storage (CCS) encompasses a suite of existing and emerging technologies for capture, transport, and storage of carbon dioxide (CO₂) that together can be used to reduce the greenhouse gas emissions from fossil fuel power generation and other industrial sources. Achieving cuts in energy-related CO₂ emissions is critical to avoiding more than a 1.5 degree Celsius (°C) (2.7 degree Fahrenheit [° F]) rise in global temperatures by 2050 and the irreversible and damaging impacts such a temperature rise would have on people and ecosystems.³ The scale of the climate change challenge requires a portfolio of clean energy technologies and energy efficiency efforts, and most credible analyses project that CCS will have to play a substantial role in achieving the necessary emissions reductions (see Appendix 3).

CCS has been tested at a small scale, and there are a few industrial operations around the world, including in North America and Europe, which already capture and store small quantities of CO₂ emissions underground. However, the technology has not yet been demonstrated at the scale required for application to commercial power and industrial plants. To address this gap, governments of many major economies have announced plans to support commercial-scale CCS demonstration projects that store more than 1 million metric tons of CO₂ annually.⁴ Several are currently being built in Europe, China, Australia, and Canada, and many more are in the planning stages, including in the United States. Leading industrial nations, through the G8, have called for 20 such demonstration plants to be launched by 2010, with a view toward broad deployment by 2020.⁵

Actions taken to demonstrate transformational clean energy technology over the next decade will define the solutions available to help solve the climate problem.⁶ Commercial-scale CCS demonstration projects are required to demonstrate whether or not the technology should play a major role in bridging today's fossil fuel-driven world and tomorrow's low- or zero-carbon economy. Yet, as with the introduction of many new technologies, proposed CCS projects have been met with mixed reactions from the public, and in particular from the local communities asked to host them.

Community Engagement in the CCS Context

Project developers and technical experts in CCS often cite the public as a “barrier” to CCS deployment, because decisions on whether individual projects move forward often significantly depend on the local community's acceptance or opposition. The case studies from the United States, the Netherlands, and Australia featured in this report suggest that communities often have more concerns and questions about CCS than about more established industries and technologies. The guidelines for community engagement, however, were written with the belief that decisions on individual demonstration projects ultimately hinge on site-specific factors, including the needs of the local community. While much social science research around CCS to date has focused on gauging public attitudes toward the technology or on education and outreach best-practices for project developers (see Appendix 2), we focus instead on providing recommendations for creating a culture of effective, two-way community engagement around CCS projects.





In addition to project developers and host communities, there is a third partner essential to effective community engagement around CCS: regulators. In some countries, regulatory frameworks governing CCS development and deployment, including rules for community engagement, are already in place (see Appendix 1). In others, an environmental regulatory framework for CCS does not yet exist, and the advent of demonstration plants is forcing regulatory policymakers to make real-time decisions about how to ensure projects move forward safely, and what level of public participation should be required in the decisionmaking processes.

The engagement around any one project, therefore, is contingent on the interactions of three primary groups: local decisionmakers (typically on behalf of those in the community), regulators, and project developers. All three groups are addressed in this report. It is important to underscore upfront, however, that effective community engagement is measured by the success of the *engagement process*, and is not contingent upon agreement between the project developer, regulator, and community on the outcome or the design of the CCS project. Nevertheless, effectively engaging communities can help move CCS projects forward and foster continuing constructive relationships between project developers and communities. Such relationships can help ensure that commercial-scale CCS demonstrations and any subsequent commercial projects progress in such a way that local economies, values, ecosystems, and people are respected, and the potential of the technology in helping to mitigate climate change is fully realized.

About the Guidelines

The Guidelines was drafted by authors at WRI in close consultation with an international group of stakeholders (see inside front cover) with specific expertise and experience in engaging local communities regarding deployment of CCS technology. This effort builds on WRI's previous 2-year consensus-building stakeholder effort that resulted in the *Guidelines for Carbon Dioxide Capture, Transport, and Storage*, a set of technical guidelines for how to responsibly proceed with safe CCS projects.⁷ The community engagement guidelines for CCS are intended to serve as international guidelines for **regulators** (including those in both regulatory policy design and implementation capacities); **local decisionmakers** (including community leaders, citizens, local advocacy groups, and landowners); and **project developers** to consider as they plan and seek to implement CCS projects.

The Guidelines begins with an introduction that describes their intent, a working definition of community engagement, and why effective engagement is an essential element of CCS deployment. It then provides an overview of relevant CCS technology issues, including the status of CCS technology, regulatory and permitting processes, and the timeline and various stages of a representative CCS project. The report then reviews existing relevant experience in community engagement, presented in six case studies from CCS projects. These studies were drafted by stakeholders engaged in the development of the Guidelines who had a hands-on role either in engaging the local community or in decisionmaking around the featured project. Chapter 4 of the report presents the guidelines for community engagement on CCS.

Key Principles in CCS Community Engagement and Roles for Each Party in the Process

	Understand Local Community Context	Exchange Information about the Project	Identify Appropriate Level of Engagement	Discuss Risks and Benefits of Project	Continue Engagement through Time
REGULATORS	Learn community concerns. Determine, meet, and possibly improve public participation requirements.	Educate, respond to, and provide information to the public.	Establish a multistakeholder engagement process.	Require communication and contingency measures and regular updates during life cycle. Evaluate environmental and other impacts.	Require public participation at key stages and increase engagement in the process.
LOCAL DECISIONMAKERS	Understand community interests, identify leaders, and establish a dialogue early.	Contact developers early. Ask questions. Identify, seek, and publicize pertinent information about the project.	Determine engagement level and establish a transparent process.	Ask questions. Identify and communicate concerns and clarify follow-up process. Insist on full disclosure.	Establish institutional memory, possibly a taskforce. Consider participating in monitoring and reporting. Regularly update the community.
PROJECT DEVELOPERS	Assess community dynamics and your historical presence. Weigh participatory engagement.	Engage early and develop a relationship with the community. Answer questions. Seek input, and provide information openly and transparently.	Foster two-way engagement; consult and negotiate with communities. Address concerns. Convey feasible level of engagement.	Answer questions. Discuss with community risks, benefits, uncertainties, and mitigation and contingency plans. Consider benefit sharing.	Engage community at each step of project schedule. Consider informal, long-term relationship to ease stewardship transition.

This effort was initiated with a hope of providing a set of best practices to guide the engagement of future commercial CCS projects, if the demonstration projects prove successful. The guidelines for regulators are designed to guide regulatory authorities responsible for overseeing CCS projects but also offer recommendations for improving the public participation rules as new regulations are drafted. The guidelines for local decisionmakers highlight how, in some cases, communities can take a proactive role in shaping the engagement around a potential CCS project, rather than a passive role as purely receiver of information. Finally, the guidelines for project developers highlight principles and activities that can be employed to promote effective community engagement and involve the local community in the CCS project.

The guidelines are separated into five categories as summarized in the table above. The full text of the guidelines follows, presented by audience. In Chapter 4, the guidelines are presented by engagement principle, with an introductory overview of each issue.



Understand Local Community Context

- Request that the developer assess and report the needs and concerns of each local community as part of the required engagement plan. (regulatory authority and regulatory policy designers)
- Consider commissioning local opinion polls or meeting with local stakeholders to gain insight into the situation and specific context, in addition to any requirements that project developers may have to do the same. (regulatory authority)
- Evaluate the effectiveness of current or prospective requirements in reaching community members who will be affected by the project. If these requirements are considered insufficient, policy designers may include new requirements (for either developers or themselves), such as conducting follow-up assessments to determine if specific stakeholder groups were adequately represented in decisions about the project and commissioning opinion polls to gauge the reaction of individual subgroups within the host community. (regulatory policy designers, and sometimes regulatory authorities when evaluating engagement efforts' effectiveness)

Exchange Information about the Project

- Consider developing a program to provide accurate informational materials to the local community regarding CCS technology and its role as a climate change mitigation strategy and economic driver. Adapt the materials to meet the needs and interests of specific segments of the public. If providing information of this nature falls outside the regulator's mandate in a given jurisdiction, consider engaging the appropriate government agency to provide this information. (regulatory authority and regulatory policy designers)
- Establish national or regional standards for public databases of information on CCS injection wells and CO₂ in geological storage, or liaise with regulators across other jurisdictions to establish as much harmonization as possible between public databases and to ensure appropriate public accessibility. (regulatory policy designers and sometimes regulatory authorities)
- Ensure that project developers provide all available nonproprietary and nonsensitive data that can be made publicly accessible and interpretable as part of their required engagement plans, and take steps to ensure the public—especially local community members—have easy access to such information. Examples may include a searchable web page open to the public, periodic announcements in the local print media outlets, and/or monthly newsletters

to interested parties. Project developers should also be required to provide additional resources and support to local communities when necessary, such as translators, cultural facilitators, or independent technical liaisons to explain any required technical information to local citizens in easily understandable terms. (regulatory authority, and sometimes regulatory policy designers in regards to requirements for project developers).

- Ensure there is a plan for providing access to information regarding the project during the post-closure stewardship phase (if stewardship is transferred to the government), or require developers to provide such information (if they are still responsible to do so under the relevant regulations after site closure). (regulatory authority and regulatory policy designers)
- Consider the effective limits of a formal hearing as a venue for information exchange in the local community context, and explore alternative information exchange channels, where warranted. (regulatory authority)
- Require developers to report the most frequent questions being asked by the community during the permitting process, in order to inform subsequent steps in the community engagement process plan. (regulatory authority and regulatory policy designers)
- Analyze the evolving inventory of questions and their respective answers over time, in order to flag local issues that can inform future regulatory requirements. (regulatory authority and regulatory policy designers)
- Use media and social media to communicate information about the regulatory process to the community. (regulatory authority and sometimes regulatory policy designers)
- Provide answers to community questions in real time when possible, as opposed to logging questions and providing answers at a later date. (regulatory authority)
- Designate an agency representative—preferably someone familiar with the community or linked to others who can provide the necessary guidance on local context—whose explicit responsibility is to communicate information clearly and concisely and designate time to listen and respond to questions from the community directed to regulators. (regulatory authority)

GUIDELINES GROUPED BY AUDIENCE: REGULATORS

Identify the Appropriate Level of Engagement

- Establish processes for multistakeholder engagement with the community as part of the rule making process. (regulatory policy designers and sometimes the regulatory authority)

Discuss Potential Impacts of the Project

- Include regulatory requirements for a risk-communications plan that includes descriptions of contingency measures. (regulatory policy designers)
- Require regular updates from the project developers throughout the project life cycle. (regulatory policy designers)
- Regularly compile a list of concerns from the community, and require project developers to constructively address these concerns with the relevant stakeholders, even if the real risk around such issues is negligible. (regulatory authority)
- Evaluate the environmental impacts of a project, including ensuring the preservation of endangered and threatened species and the protection of drinking water resources, and make the findings publicly available and easily accessible. (regulatory authority and sometimes regulatory policy designers)
- Require thorough assessment and full disclosure of all costs and impacts to different parties, comparing—where appropriate—the cost and impacts of the proposed project with potential alternatives. (regulatory authority and sometimes regulatory policy designers)
- Accept or reject permit applications based on a comprehensive review process. If accepted, require risk communications, contingency measures, and regular updates during the project life cycle. (regulatory authority and sometimes regulatory policy designers)

Continue Engagement Throughout the Project Life Cycle

- Require public participation at key stages throughout the project as part of the permitting, operating, and site-closure certification processes, and consider engaging and ideally involving the community in post-closure stewardship activities, such as maintenance at the site when possible and periodically discussing monitoring and updates of the site's stability during long-term stewardship. (regulatory policy designers and regulatory authority)
- Consider avenues for increased and updated local community engagement in the regulatory development process. (regulatory policy designers)
- Ensure that necessary resources are allocated toward and made available for appropriate engagement initiatives by the regulatory authority during the post-closure phase of the project. (regulatory authority)



Understand Local Community Context

- Local government representatives should understand the community and its interests, recognize the diversity of views, and ensure that all groups are given equal opportunities to be involved in the engagement process.
- Consider the possibility of conflicting interests among local community members, especially those of elected officials, business owners, or influential parties that could benefit from or be damaged by the proposed project, regardless of its impact to the rest of the community.
- Create a map of potential interests outside the community and how these influence local decisionmaking. Alongside economic and political considerations, map nonlocal channels of influence, such as NGOs, social media, and the Internet. Consider how these can influence local decisionmaking and how they might also combine with local or other interests to directly or indirectly influence the project and the engagement plan.
- Identify who will represent the community in interactions with the project developer. Ensure that such leadership is clearly communicated to the project developer and regulator and is considered a trustworthy source by the community. In case a single representative cannot be established because of competing or diverse local interests, this should be clearly communicated to regulators and developers as early as possible, in order to accommodate engagement initiatives and exchanges accordingly.
- Establish an early dialogue with the project developer about the imperative for an open, transparent, and inclusive process for engagement around the project.
- Identify which data the community would like to access, and work with the regulator and project developer to ensure an effective process for making that data accessible and comprehensible to interested citizens.
- Establish clear roles and expectations for communication processes in order to avoid misunderstandings.
- Inform the project developer of the community's desired venues for communication. Seek opportunities to exchange information that will best suit the needs of the community. If needed, request from the developer additional support or resources, such as translators or mobile communication enablers.
- Participate in public meetings and other venues for information exchange organized by the project developer, or consider hosting such an exchange.
- Use social and traditional media channels to communicate information about the project to community members unable to attend public meetings.
- Seek out information from sources independent of the regulator and project developer, such as academic institutions and NGOs (see also potential additional sources of information in Appendix 3).
- Consider the benefit of connecting with other communities that have been through similar processes (successfully or not), and establish a dialogue to take advantage of any lessons learned that could be applied to your community—keeping in mind that every CCS project and local context combination is unique.

Exchange Information about the Project

- Make early contact with project developers and regulators, potentially establishing a working committee or task force to understand implications of CCS on the local community. Ensure that such committee adequately represents the diversity of views embodied in the community. Be proactive as soon as the community learns about the project; do not wait for developers to come to you.
- Ask questions about the project and the technology. When answers are not available, identify a plan and a process for follow-up with the regulator and/or project developer.

Identify the Appropriate Level of Engagement

- Determine whether the community will be engaged in a consultation or negotiation, and on which issues, and work with the project developer to define a transparent and effective process for engagement.

GUIDELINES GROUPED BY AUDIENCE: LOCAL DECISIONMAKERS

Discuss Potential Impacts of the Project

- Identify risks that pose concerns over the life cycle of the project, and then ask the regulator and/or project developer questions about these risks and the planned contingency measures.
- Identify and clarify processes for follow-up, when answers to risk- and benefit-related questions are not immediately available.
- Acknowledge differences between perceived risk and quantifiable risk, being as objective as possible when considering the impact of newly available information on the original perception of risk.
- Discuss potential benefits from the project, including benefit-sharing or other improvements to the community's well being.
- Insist on full disclosure and considerations of costs and potential impacts of the project, ensuring that locally important natural and cultural resources are protected.

Continue Engagement Throughout the Project Life Cycle

- Consider forming a community task force to work with the project developer and regulator, and ensure they provide periodically updated information about the project to the general community on an established timetable.
- Consider the potential role of the community in monitoring and reporting the project's impacts over time, and work with the project developer and regulator to formalize these activities.
- Encourage key community members who understand the project to uphold institutional memory by building and maintaining long-term relationships with regulators and project developers. Encourage youth to participate in the process, in order to pass the community's experience to subsequent generations and ensure effective engagement continues throughout the project's lifetime.



Understand Local Community Context

- Conduct a thorough social-characterization assessment of the community, aiming to understand community leadership dynamics, decisionmaking processes, and general local context. Complete this before establishing and initiating an engagement effort.
- Consider your historical presence in the community and the community's history with other industrial projects, and the effect each will have on your CCS project proposal.
- Conduct a stakeholder analysis, mapping each identified local group and focusing on power issues, excluded stakeholders, and any specific problems within the community that might be solved or exacerbated by the project. Map potential concerns of each identified stakeholder.
- Based on the above, establish the most effective level of engagement for the local context and phase of the project. When pursuing participatory engagement, commit to the consequences of that participation, taking the opportunity to establish a relationship with the community.

Exchange Information about the Project

- Designate an experienced and trained representative to act as the community's link to the project. This representative's responsibility is to build relationships, communicate information clearly and concisely, and take the time to listen and respond to questions, relaying community inputs and concerns back to the rest of the project team. Consider making funds available for the community to hire its own independent expert to aid the engagement process, if needed.
- Be prepared to provide information, and to do so in an open and transparent process. Transparency includes providing information about project alternatives that are (or could be) under consideration, explaining project timelines, and addressing questions on how the project may positively or negatively impact individuals and the wider community.
- Engage community leaders as early as possible in the planning process, and begin community engagement well before any decisions are finalized. Seek community input on alternative project characteristics, where possible.
- Establish engagement opportunities before formal meetings required by regulations occur, and use formal meetings as only one in a series of vehicles for engagement opportunities.

Avoid using a formal public hearing or town hall meeting as the first engagement with a community, lest being perceived (either correctly or incorrectly) as “only doing what is required by law.”

- Consider a wide variety of methods for communicating and answering questions. These can range from one-on-one dialogues with individual community members to a series of regular town hall meetings. Ensure that proper transparency principles are fully employed in all interactions with community members.
- Recognize opportunities to use both traditional and social media, and employ best practices when doing so.
- Be prepared to answer in a factual manner very detailed questions about the project proposal or the technology.
- Keep track of questions asked over time in an inventory, and address these openly and in a timely fashion. This includes admitting when you do not have an answer to a question and agreeing to a process for providing additional information in response.
- Use the inventory of questions from the community to gain insight into the local context, refine the community engagement plan, and identify potential issues that need to be proactively addressed.
- Take into account that the information you provide may not be fully trusted and interpreted as neutral. Whenever possible, encourage community involvement in the monitoring and reporting of information. Consider having third parties contribute to the monitoring and/or verification processes.

Identify the Appropriate Level of Engagement

- Assess options for engagement in specific issues, and seek opportunities to foster two-way engagement by consulting and negotiating with communities, subgroups, and individuals, rather than simply informing them.
- Recognize that different groups among the local community stakeholders will sometimes require different levels of engagement to satisfy their needs, in addition to different engagement strategies to address their specific characteristics.
- Assess and convey the level of engagement that is feasible based on your ability to alter elements of the project design.

GUIDELINES GROUPED BY AUDIENCE: PROJECT DEVELOPERS

Discuss Potential Impacts of the Project

- Discuss the potentially positive and negative aspects of the project as a key part of the two-way community engagement process, following best practices for risk communication when needed.
- Respect an individual's or community's concern about a particular risk—even if the real risk is perceived by the developer to be extremely low or nonexistent—and provide data in a transparent manner to the community, in order to inform and potentially reduce discomfort from risk perceptions among local citizens.
- Acknowledge uncertainties and assumptions in risk assessments, and explain contingency plans that will be put in place to mitigate any realized risks.
- Be open to community ideas on benefit-sharing schemes and ways to improve the project, and ideally take the initiative to propose benefit-sharing or project-improvement procedures to address specific needs or concerns from the community.

Continue Engagement Throughout the Project Life Cycle

- Include community engagement activities in each step of the project's schedule, beginning with feasibility studies and ending after site closure or when the responsibility for the site transfers to the competent authority.
- Consider maintaining an informal relationship with the local community, even after responsibility for the site is transferred to other parties, and take steps to ensure a smooth transition to the new site stewards by leveraging the long-established relationship with the community.

