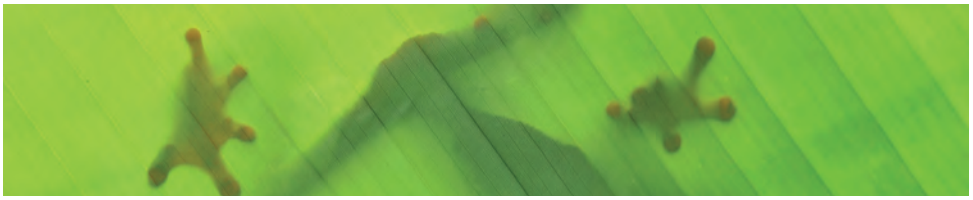


THEMATIC REPORT

knowledge sharing event on public engagement

HOSTED BY THE BELCHATÓW CCS PROJECT

SEPTEMBER 28-29, 2011

A REPORT FROM THE EUROPEAN CCS DEMONSTRATION PROJECT NETWORK

contents

Introduction

This report presents the discussions, conclusions and actions agreed at a one-day thematic workshop on public engagement. The workshop saw participation by representatives of 5 out of 7 members of the European CCS Demonstration Project Network, supplemented by a representative of the EC's DG Research. The workshop was one of three parallel tracks in the Network knowledge sharing event that was kindly hosted by the Bełchatów project. The other two parallel tracks were on permitting and storage.

The public engagement workshop, part of a series of three in 2011 (with the first being held in Brindisi in February and the second in Compostilla in June), focussed on four items:

1 Sharing experiences on emerging public engagement issues;
2 Discussion on the implications of a recent report on CCS communication, *Evaluating global Carbon Capture and Storage (CCS) communication materials: A survey of global CCS communications, a report for CSIRO, Work Package 1 by Olaf Corry and David Reiner, University of Cambridge, 21 June 2011*;
3 Further development of a web-supported CCS issues tracker to serve as a tool to support CCS project communication professionals;
4 Agreeing the Network's thematic outputs for 2011 in the area of public engagement.

Experience sharing on emerging public engagement issues

In the previous meeting in Compostilla, the group had agreed to devote time and take a proactive stance to issues management in relation to public engagement and CCS, inspired by the motto: 'an issue ignored is a crisis ensured'. As a follow-up to this, the Łodz meeting provided a platform for sharing what projects believe to be emerging issues and in a series of 10 minute presentations, the participating projects shared their thinking and questions. After each presentation, a short discussion was held to identify commonalities and avenues for resolving issues, should they arise.

ROAD

The ROAD project had identified a number of potential issues and risks that require readiness from a public engagement perspective:

- Perceived HSE risks of solvents used in a capture plant, following the debate of Statoil and Bellona over the CCS project in Mongstad. It is important that a consistent response is made, should the issue arise. Discussion of this topic revealed that a public engagement mitigation strategy should address issues and crisis preparedness;

- Perceived HSE risks of (offshore) CO_2 storage, in which scenarios are put into the debate in which CO_2 might leak from gas fields. Although offshore storage might not be at the heart of negative public perception, it might develop to become an issue through films such as Bermuda Dreieck Nordsee, recently aired on RTL television in Germany. Response strategies would include issues and crisis preparedness and monitoring public opinions;

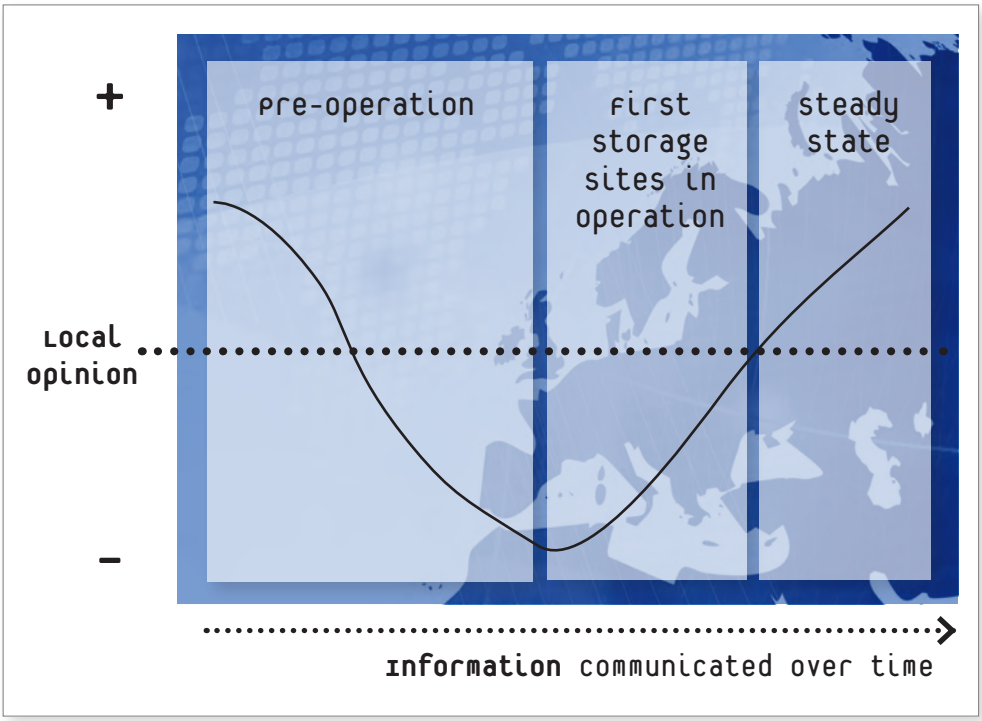
- Lack of public acceptance due to adverse NGO campaigns in which NGOs would try to mobilise local communities against CCS projects (e.g. Barendrecht). The group thought that an issue management strategy for this issue would consist of issue and crisis preparedness, monitoring of opinions, pro-active stakeholder management and focus on development and communication of local value propositions;

- Delay or cancellation of (other) demonstration projects. The issue here is that substantial delay and/or cancellation of demonstration projects could potentially result in negative publicity and impact CCS projects in general. A response strategy would include: issues and crisis preparedness, monitoring of opinions and pro-active stakeholder management.

Following the ROAD presentation, the following points were identified as discussion topics within the public engagement theme:

- How to deal with the net negative effect of the additional information about CCS on public opinion? The NearCO2 project in its Work Package 2 deliverable (WP2, 2011) seems to have identified receipt of more information by local communities does not improve public opinion, in fact, depending on the information source, it can make it more negative.

The group suggested that it might well be that additional information communication in pre-operational stages might be received with understandable concern due to a lack of 'on-the-ground' experience with the technology, especially the storage part of the value chain. It was hypothesised that reception of CCS communication might follow a pattern such as:



↑ Figure 1: Information communicated over time, project phases and opinion forming.

Further research and experience in this area would be welcomed by the public engagement group. Acceleration of 'bending the curve' could be achieved by developing further storage pilot projects, particularly onshore and in Europe. The European Commission's research programmes might play an active role in developing such storage pilot projects. Also, (monthly) monitoring of development of local opinions over time was advocated by the member projects.

- A second question that was put forward by the ROAD project was how can we improve perceptions of CCS as an effective and efficient CO_2 abatement technology? The group suggested that as a minimum, impartial information on CCS and its role in abating climate change should be made visible and promoted. It is believed that the information provided by the IEA and other expert organisations on CCS is of great importance.

- A third question that was raised by the Dutch project was how local value propositions can be developed that can increase local relevance and acceptance of CCS? The participants shared the thought that local opinions are particularly susceptible to local value propositions (value propositions that are targeted at national or international level are less relevant in winning hearts and minds of those who might oppose CCS locally). It is clear that carbon capture technology applied to coal-fired power plants is a great contributor to safeguarding and sometimes even extending local job opportunities, but it is not so clear how local populations would feel compensated for approving a nearby storage site.

Don Valley

Don Valley shared with the group that an issue to manage for them is the high expectation of employment. The Doncaster area, where the team are developing their CCS project can be characterised by:

- High level of NEETs ("*not in education, employment, or training*");
- Skilled workforce, but perhaps with outdated skills due to the decline of the area's traditional engineering base;
- Lack of appropriate local training;
- In the area (in Yorkshire, UK), the Don Valley CCS project would be the single largest construction project, where people could receive training or apprenticeships and go on to secure permanent employment with the project;
- The expectation of the number of posts the local population could fill is high both during construction and that there is would be hundreds of jobs (direct jobs on-site) would be there post-construction;

Local schools do not have a track record of high levels of academic achievement and the arrival of the Don Valley project is an opportunity to help some pupils raise their life expectations.

Despite the relatively early stage of development of the project, the previous owner of the project, Powerfuel Power, had carried extensive work on how recruitment and apprenticeship schemes could be established and run in such a way as to give the maximum opportunity to the local population.

The new project owners, 2Co Energy, are now in discussions with local organisations to see how best it can enable suitable training for potential future employees and contractors, pre-employment training, apprenticeships, etc.

Although the project is keen to positively impact the socio-economics of the area and to be an agent for economic regeneration in the area, it can't commit to programmes before the FID for the project as it would only result in expectations that cannot be met. The group discussed if jobs were not to be created, how else can a CCS project meet local expectations for economic regeneration? Perhaps expectations with respect to employment can be traded for other opportunities, such as new infrastructure, landscaping, financial compensation, contributions to the social infrastructure of the area. It is generally found that CCS applied to an existing power plant, the positive argument is job security, rather than additional jobs. During construction of a new power plant (with CCS), a sizeable workforce is required (e.g. several thousands of workers are needed in the ROAD construction area), but it should be noted that these are typically international workers that are contracted by the suppliers, rather than locally sourced.

Compostilla

The Compostilla project made a slightly different contribution to the meeting, by means of updating the group on two important public engagement milestones that have been achieved since the group last met. Embracing an approach of active listening, the project prioritised and undertook a series of meetings with local populations and politicians in different towns. It was felt that this had particular importance as the opinions of especially local mayors is fundamental in order to obtain the necessary licenses for the planned seismic campaign in the area. One example of such a meeting is a stakeholder meeting with around 25 mayors of the (Socialist) area of Léon, Spain.

↑ Figure 2: Compostilla CCS Project meeting with local mayors from Léon, Spain, September 2011

In general, the mayors responded positively to the proposed campaign, however there is a tendency that the communities are looking for compensation for the interruption. The project is researching what type of compensation would be acceptable. It is interesting to note that quite a few vocal participants in Compostilla meetings are people who work elsewhere in Spain, but return for their holidays to their native region.

Furthermore, the Compostilla project has facilitated a National Press Tour, inviting the main Spanish media and science and environmental journalists (through associations of science communicators and environmental journalists), with the objective to increase the knowledge at state-wide, regional and provincial levels through newspapers, radio and television stations of nationwide broadcast. This has now greatly contributed to placing the project on the map. It should be noted that the project was explained in a neutral way, with the prime objective to help communication experts to position themselves for or against the project (it appears that there are very few against it).

The media impact was very important during the 20 days following the press tour, as there were published interviews, specials in newspapers and TV about the project, apart from the visit itself.

↑ Figure 3: The Spanish national press visit the Ciuden test centre in Ponferrada, Spain.

The participants to the workshop reflected that the Compostilla, Porto Tolle (through its Brindisi pilot plant) and ROAD (through its visitor centre at the building site) are perhaps in better position to engage the public, as these have something tangible to show. It was felt that timing of communications should be commensurate with the ability to demonstrate actual progress.

Compostilla was wondering whether there is a significant difference in opinion amongst population of capture and storage sites respectively (Compostilla has a 150 km distance between the two sites). Bełchatów readily confirmed this. In their case, there are no real issues regarding the capture site, which is located in the Bełchatów Power Plant area. The issues are more associated with the storage site. To date, two out of three potential storage sites have been investigated, with distances varying from 60 to 115 kilometers (according to the preliminary pipeline routings) from the capture plant. It is hard to convince mayors that storage is needed in their area and the argument regarding climate change isn't readily accepted as the prime rationale. ROAD reflected that it faces less issues with the population north of Rotterdam (Hoek van Holland, used to industry already) compared to the population south of Rotterdam (Oostvoorne, highly educated people who see industrial infrastructure appear on the skyline).

Compostilla also indicated that it is keen to learn how to deploy social media best in public engagement. It was felt that the Porto Tolle project was most advanced in this area, particularly through the innovative ways the Enel organisation has embraced new web technologies in communication its purpose and strategy for abating climate change (e.g. a virtual tour).

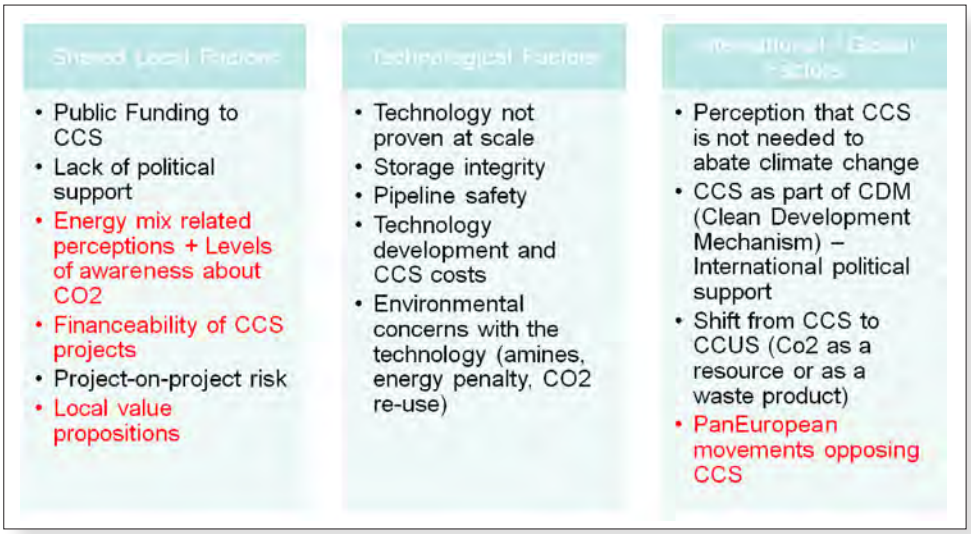
Several projects have been actively promoting similar, operational projects elsewere in the world (such as Weyburn, Sleipner or In Salah) in their local campaigns, but as these are all from far afield, there might be a need for more storage pilots in Europe to be able to convey a re-assuring story that is set closer to home.

Porto Tolle

The Porto Tolle contribution started with a reflection on the issues identified by the Network's public engagement group over the last few months and contrasted them with those identified by the Carbon Sequestration Leadership Forum (CSLF). The latter suggests the following technical issues to be managed:

- Energy Penalty Reduction;
- CCS with Industrial Emissions Sources;
- Technology Gaps Closure;
- Best-Practice Knowledge Sharing;
- Risk and Liability;
- CO_2 Transport and Compression;
- Storage and Monitoring for Commercial Projects;
- Technical Challenges for Conversion of CO_2 EOR to CCS;
- Competition of CCS with Other Resources;
- Life Cycle Assessment and Environmental Footprint of CCS;
- Carbon-neutral and Carbon-negative CCS;
- CO_2 Utilization Options.

After some discussion and with some re-arrangement, the proposed issues to be tracked and co-managed by the Network members are as follows (Porto Tolle prioritises the issues marked in red):



↑ Figure 4: Issue list for the public engagement group of the Network

Porto Tolle continued its contribution by presenting their thoughts on their prioritised issues.

Energy mix related, skewed and uninformed perceptions: the issue here is that public acceptance is harder to obtain when faced with low levels of knowledge about what CO_2 is and what its role as a leading greenhouse gas influencing the earth's temperature in a decisive way. The issue clearly links with low awareness levels about emission sources and myths about dangers (in some cases, CO_2 is perceived as more dangerous than methane). It is felt that this issue pans out differently depending on stakeholder groups. Where the general public sees public health concerns and has a plain preference for low CO_2 emission energy (post-nuclear), informed members of the public point out the low climate change relevance of capture levels before industrial deployment of CCS and point to alternatives such as natural gas and other less CO_2 rich fuels. Governments, for their part, frame CO_2 capture in the context of all the other policies to mitigate CO_2 emissions and manage priorities in terms of public spending.

The (potential) consequences of this issue not being managed correctly could manifest themselves at various levels:

- At the project level: dissemination of incorrect information increases the perception of risks associated with transport and storage and might reduce the perception of the real value of a single demonstration project;
- At the CCS Network level: perception that this is a business of increasing CO_2 emissions, by enabling more fossil fuel plants (rather than reducing them);
- At the level of CCS in general: comparisons between the impact of all CO_2 captured with CCS in the world versus emissions avoided by renewable energy generation can be misleading and remove a lot of relevant aspects in ensuring a balanced energy mix.

The action undertaken so far by the Porto Tolle project to manage this issue are to initiate, facilitate and undertake educational projects involving basic awareness about CO_2 and to study models for CO_2 based coalitions of stakeholders. It is felt that the issue is still there, as there seems to be no coordinated effort at international and national levels to promote information about CO_2 (still no information campaign focusing specifically on this subject and therefore, continued lack of awareness of CO_2 as a resource). Also, the financial crisis reduces the space for non-emergency issues.

It was felt that a coordinated effort at European level, possibly involving science museums to provide basic education with respect to CO_2 would greatly help CCS projects in their public acceptance and positioning. There may be a role for the EC in facilitating such an effort.

The second issue that was put forward for discussion is in the area of **financeability of CCS projects**: there is debate about the cost of implementation of CCS including energy penalties, costs associated with capture (technology-specific), with transport (on/off shore), with storage (depending on type of technology, depth, etc and on the usage of CO_2 for Enhanced Oil or Gas Recovery, or storage only).
Again this issue is multi-facetted and different stakeholders groups oppose CCS for different facets of the issue. The general public might fear an increase in energy tariffs, whereas the informed publics might fear the cost-benefit outcome of CCS is not attractive. Investors need to be convinced about return on investment models and regulators need to be satisfied with tariff arrangements and pricing models for energy as well as CO_2 pricing. Finally, governments need to be able to justify incentives for CCS and defend any tax pressures arising from CCS. Also, governments need to be able to strike a balance with national renewable energy efforts in their overall commitment to CO_2 reduction targets.

Potential consequences of this issue developing are that at the project level a shift in perception takes place: what first looked like an opportunity to generate investment, could be turned into a loss making proposal. At the CCS Network level, it would become harder to present the case for economic advantages of CCS and justify European funding, specially if some member states take formal positions to opt-out of CCS. For CCS in general it might mean that opinions start to build around the idea that CCS is more needed in non-OECD countries, while investment to demonstrate technology is to be undertaken mostly by OECD countries.

The actions undertaken so far are to reinforce the need for public funding and to emphasize CCS as an opportunity to export knowledge and build competitive advantage. Nevertheless, it is still felt to be an issue because: the pressure on public spending increases due to the financial crisis, political support is harder to materialise in concrete actions, there is no consolidated position regarding the many (and contradictory) cost estimates and NGO's and pressure groups are able to choose the higher cost ranges to advocate a renewables-only agenda.

The third emerging issue tabled by Porto Tolle is the **lack of (local) CCS value propositions** and this issue was shared by many of the participants in the workshop.

Porto Tolle finds it difficult to communicate with people who are afraid of CO_2 storage and illustrated this by stating that in some areas the population has demonstrated fears around CO_2 being stored in places where previously there has been methane. In overall terms, the issue is related to questions as to how to make people accept the value of fighting for a greater goal without thinking immediately on a compensation, how to shift thinking from current cost to future benefits, how can CCS influence the overall value proposition of, for example, the construction or conversion of a power plant.

This issue should be managed taking into account that there are various positions in a project's stakeholder landscape. The general public generally accepts the idea of contributing to the battle against climate change but is not willing to bear additional costs for it. The informed public on the other hand could accept additional cost for action, but needs to see concrete advantages (for example: electrical mobility with low carbon energy from fossil plants with CCS).
Many NGOs see CCS as a loss-making proposition that will divert investment from renewables and will not be effective in time. Governments believe that CCS must bring energy security to the table for it to be a good value proposition. Clearly climate change mitigation needs to be demonstrable part of that value proposition, as well as the containment of energy costs and even cost reduction.
Some media see CCS as an imposed need of developed countries to allow developing countries to make the same mistakes as we did.

What are the consequences should this issue (further) arise and play out? The appreciation is that at a project level, it would increase the pressure on that single project to carry the cost of local social commitments/compensations without making money for parent companies. At the Network level, if there are no projects, there apparently there is no CCS value proposition and in that case, there's no point in having a Network. For CCS in general, the issue might result in loss of political and social goodwill.

Porto Tolle is aware of the potential impact of the issue and has undertaken a series of actions that include specific messages about the value of CCS and the urgency of deploying the technology, developed a focus on education of younger generations, maximisation of the visibility of the pilot plant inauguration to emphasize local value (CCS as an element for city / region branding: the Brindisi city leadership has already found that having this novel technology within its city limits has attracted a great variety of guests that otherwise wouldn't have come to the region) and an active search for possible coalitions on CO_2 use.

The group is very aware that this issue should remain on the radar screen of project reach out teams because value proposition, being the the sum of capture + transport + storage + use, has not been demonstrated and there are not many plants in operation (see also the 2011 status report on CCS of the GCCSI).

A final, emerging issue that was raised is the **Pan-European movement opposing CCS**. With nuclear opt-out by many countries, opposition movements (of which environmental NGOs are only a part) which have formed around that issue find different targets for their opposition.

Coal and CCS could be very good candidates to form coalitions around, specially in an environment in which the "renewable-only" alternative gathers momentum.

If this issue develops, the general public will start to get confusing messages about the value of CCS, its costs, its effectiveness, its alternatives, concerns about public health, etc. Local groups opposing to power plants where CCS is to be built leverage on wider CCS criticism to become even more active; having more issues in their agenda might facilitate mobilisation of wider critical movements, specially in regions bordering with different European countries (such as Porto Tolle). Governments might find in public opinions that are critical towards CCS a motivation to develop additional reasons to delay action in areas which can be perceived as unpopular (NIMTO, or 'Not in My Term of Office' symptom). Media on their part might increase the conflict value of the argument and raise the potential for exploration of CCS-related negative issues in other countries.
Potential consequences are again on several levels. At the project level, one might find an increased exposure to scrutiny, especially from groups with low levels of knowledge about CCS. At the Network level, every action (difficulty/ problem) by a project might permeate much more readily to impact on other projects. At the level of CCS in general, a technology claiming to fight climate change which is criticised by environmental NGOs risks losing credibility. There is a clear need for credible organisations to associate with CCS.
The project has acted in the following areas to manage the issue. It has mapped environmental NGOs positions, it has raised the level of information about CCS through the creation of specific communication materials and has positioned CCS as *one* of the solutions in a wider portfolio against climate change and is actively communicating other initiatives as well.

It is believed that this issue needs continuous attention as confusing signs from countries energy policies leave open spaces for CCS critics and there are currently no concrete projects taking off that can create positive momentum. Also, the logic of the media is that many favour polemic rather than reconciliation or information provision. A deeper, underlying point is that at the moment, there is no Pan-European civil society movement that is pro-CCS.

The group then discussed a number of questions, the first one being whether there any relevant experiences in door-to-door / public square initiatives to demonstrate (with models) CCS?

Bełchatów shared that over the past summer, it has undertaken a series of 'cottage to cottage' visits (under the term External Public Engagement Campaign), which has proven to be very helpful and commendable during the first phase of the storage component of the project: it allowed the contractor to do their seismic 2D examination. The lesson here is to go to people instead of them coming to you. Also, Bełchatów has been on regional television in Poland, in a debate where they spoke with local authorities representatives, with geological experts' support. Likewise, the Compostilla team has adopted, as discussed, a very local approach to engaging with local stakeholders, combining with a more regional and national engagement via press, radio and TV media.

Porto Tolle shared with the group that they were particularly impressed by the Scottish Science and Technology Roadshow mobile exhibit on CCS *(see Figure 5)*.

↑ Figure 5: Exhibit from the Scottish Science and Technology Roadshow, perhaps a missing piece in communications on CCS?

Also, ROAD pointed out some great examples of science education in the area of CO_2, such as Dry Ice Boo Bubbles or Cool Halloween Science and it was generally agreed that more of these examples need to be shared and promoted.

ROAD pointed out that it is planning to develop a specific CO_2/CCS exhibit in collaboration with the Dutch CATO-2 platform and indicated that they would be happy to receive suggestions by its fellow member projects in this area.

The group reflected on the fact that there seems to be a lack of national stakeholder platforms on CO_2. In Spain there is the Plataforma Tecnológica Española de CO_2 (National CO_2 Platform, PTECO2), whereas in Italy there is the CCS Observatory. Other countries where the projects are based don't seem to have independent, defined, resourced, visible platforms of this nature and participants agreed that there is a gap that needs closing in this area.

Bełchatów

The Polish participants brought forward the issue of **lack of or low levels of the Polish public's awareness** concerning the need of CCS implementation. Furthermore, the project voiced that there is an apparent disconnect between the Polish governmental global warming knowledge base and the project's CCS information campaign. One effect is that ordinary people in local society meetings regularly express doubts with respect to the rationale behind the strong EU climate policy. Even if the rationale is backed, there is an increasing tendency to compare CCS with renewable sources (in Poland, especially wind and geothermal).

Particular to the population in potential storage areas in Poland is that they are not very susceptible to the climate change argument and again, geothermal energy is seen as a good alternative, despite the fact that during every meeting or event (and in brochures) knowledge is disseminated by experts and technical scientists with support from the Technical University of Łodz (also in the area of comparing CCS and Geothermy). It is explained that saline formations that are investigated for CO_2 storage purposes are not particulary suited for geothermy: the saline conditions and the relative low temperature (around 35° Celsius) would create additional technical and financial barriers to geothermy installations. Furthermore, the projected storage area required for Bełchatów project may be simply too small for successful deployment of geothermy, so there is no real competition between CO_2 storage and geothermy. A potential conflict might arise between geothermy and CO_2 storage if there is suitable store above a potential geothermal source. In those cases, the government should decide what is the best use of the subsurface structure. In any case, it is stressed by the Bełchatów team that the costly geological and geophysical research proposed to the local communes is beneficial to both the assessment of potential for geothermy as well as CO_2 storage and that it is wise to conduct it only once.

It was agreed that, certainly in case of on-shore storage, local value propositions (rather than backing of national policies) are key to convincing local stakeholders and it is a matter of urgency to develop these propositions and that an action by the group should be taken to aid each other in communicating the propositions.

A review of the survey of global CCS communications

In preparation for the sharing event in Łodz, the group became interested in the recently published report Evaluating global Carbon Capture and Storage (CCS) communication materials: A survey of global CCS communications, *a report for CSIRO, Work Package 1 by Olaf Corry and David Reiner, University of Cambridge, 21 June 2011.* The authors were contacted and it was agreed that Dr. Corry would provide an overview of the research findings to the group. The conclusions could be summarised as follows:

- CCS is treated as a technology in narrow terms;
- Risks, if covered, are narrowly technical;
- There is relatively little about who will pay and how CCS compares with other technologies claiming to reduce carbon emissions;
- There is a heavy reliance on climate change as the sole rationale justifying CCS - whereas e.g. jobs or provision of cheap energy don't seem to play a prime role in the communication;
- A large majority of CCS-communication material is overtly positive;

- More trusted sites are less strongly positive, less exclusively technically oriented and account for less of the sample.

After presentation of the findings, the element that resonated with the group was that the survey showed that by and large, CCS communication (across a selection of 194 out of 300 global, online sources of CCS communication) was primarily techno-centric and the social factor was often lacking from the communication. Also, although most sites are positive about CCS, the critical sites seem to address the non-technical elements of CCS.

A quick review of the project's own communications confirmed the primarily technical stance. In contrast, communications around renewables seem to often include (a vision for) society and the role of communities and individuals in there. It was agreed that the participants would undertake action to review their value propositions in particular with a view to create a more balanced perspective on their projects. It was suggested that perhaps storytelling techniques might contribute to this undertaking and the Network team suggested to organise an online workshop on this topic in the next months to assess whether such an undertaking is indeed worthwhile.

Further to the review of global CCS communication materials, Corry is proposing[1] a framework for understanding NGO positions in the debate on CCS. This framework maps various positions on both the problem (on an axis that stretches from perceived triggers to perceived 'root causes', i.e. from emissions via fossil fuels to the fundamental way society is organised) as well as the scope of the solution (from a mere technology to a socio-technical system). If one maps this in a two-by-two matrix, four types of 'concerns' emerge *(see figure 6)*.

The first one (1) renders 'acceptance' the main concern. This manifests itself with those groups that conjecture that emissions are the problem, and argue that CCS is a technological fix. The debate in this space is focussed on whether or not the technology will be accepted. This is the worldview of most 'acceptance research'. An observation was made in the group that many CCS demonstration projects seem to be engaging with those who have this type of concern.

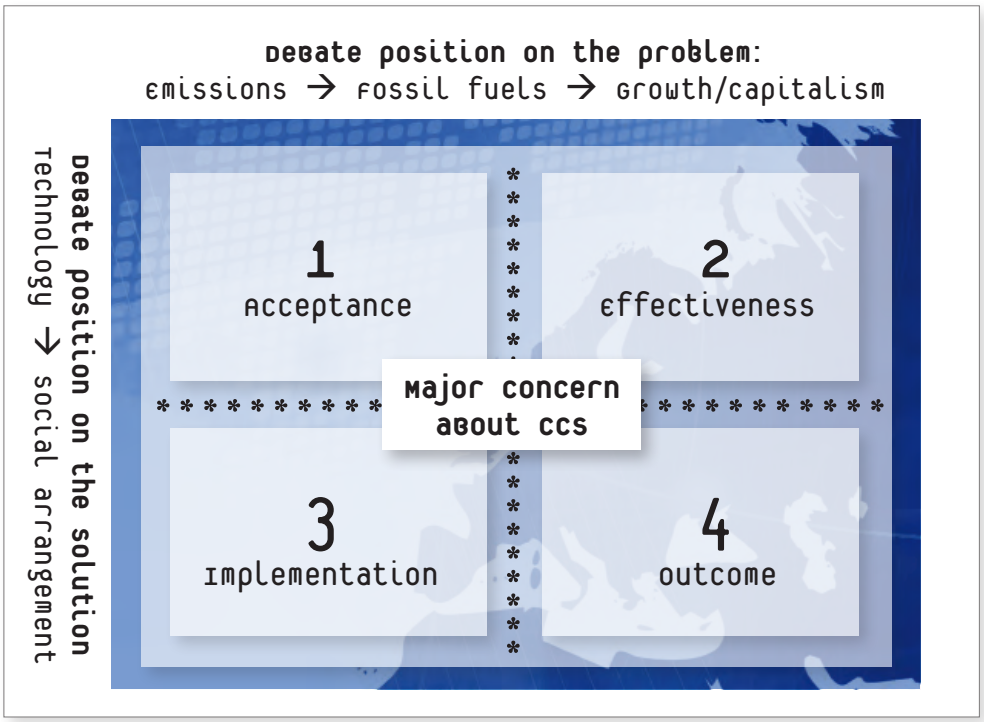
The second type (2) of concern emerges for those who assume that fossil fuels or capitalism itself is the problem: the debate in this space is about whether CCS is an effective solution to solve the 'root cause' . It is clear that some NGOs would argue that CCS in actual fact is maintaining a societal regime that they would not favour.

A third type of concern (3) is held by those who find that emissions are the problem, but disagree whether CCS can actually be implemented (in time) as a social arrangement, with appropriate legislative frameworks, funding sources, oversight institutions, etc.

1 In: *'Beyond 'for or against': Environmental NGO-evaluations of carbon capture and storage as a climate change solultion,* Olaf Corry and Hauke Riesch, in: Shaping the Future of CCS: Understanding Carbon Capture and Storage Systems and Knowledge from Social Science Perspective, Nils Markusson, Simon Shackley, Stewart Russell (editors), London, Earthscan (2012)

A fourth and final concern (4) is held by those who believe that the problem is 'capitalism' itself and to whom the social arrangement that would manifest itself in a world full of CCS is an unacceptable outcome.

The participants to the workshop felt that demonstration projects need to be better equipped to enter into debates with stakeholders that hold other concerns than type 1 (as most communications to date seems to be focussed on that type).



↑ Figure 6: Concerns about CCS as depending on positions on problem perception and solutions.

CCS issues tracker

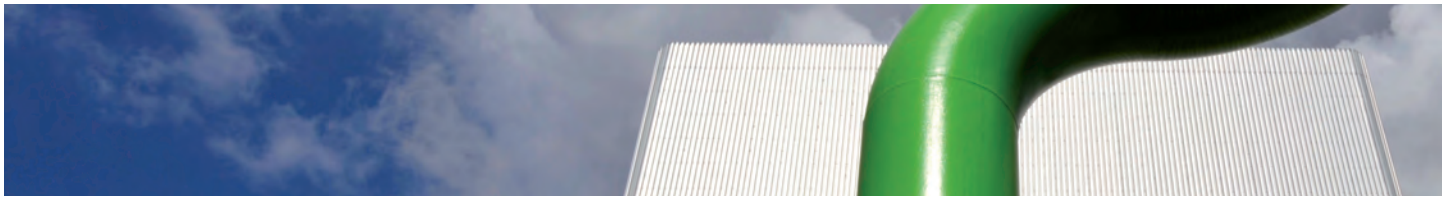
As a follow-up to the work undertaken earlier by the group, a brainstorm was held to identify key-words against each of the issues as shown in figure 4. With these key-words, the Network team is able to further develop the automatic issues tracker and sentiment analyser proposed in the previous Network meeting in Compostilla on this topic. With the use of the key-words, intelligent search technology can be deployed to help interpret CCS resources on the web, in particular news-related information and social media. It was agreed that the database that underpins the global CCS communications review presented in the meeting would be made available to support this activity, which was welcomed as a good opportunity to foster further links between the Network and the research community.

Thematic outputs 2011

The participants to the workshop agreed to undertake an effort to produce a number of specific outputs associated with the public engagement Network theme. The outputs include:

- A repository of project communications materials and list of public engagement interventions ('case studies');
- A CCS issue tracker and e-mail notifier to support readiness within Network member projects on emerging issues;
- Development of value propositions, in particular to create further readiness in debates with those who have assumed or are assuming position 3 in *Figure 6*. This activity is to be supported through storytelling techniques;
- Further cross-linking of project websites;
- Development and sharing of background information on CCS success stories, facilitated through the Network team through an invitation-based webinar intervention.

Furthermore, it was agreed that some further exploration of the debate 'grid' represented in *Figure 6* would be undertaken. In particular, the participants were interested in mapping project stakeholders onto the grid and to triangulate that with the current messages that are being communicated to each stakeholder group. This then would help to assess whether those messages are actually purposeful for those on the receiving end. Finally, it was suggested that future R&D activities should focus less on further surveys and mapping activities, but more on creating insights in compensation mechanisms and answering specific questions that are pertinent to local communities.



Conclusion

The thematic engagement group has now met six times over the period of 2 years, with a steady core of participants. The exchange in the group has been open and honest and new ideas have emerged at all meetings, including this event, which focussed very much on being open about issues that (might) emerge and to which an active response from CCS demonstration projects needs preparing, just in case. This is particularly important in times when CCS is under pressure and in times where arguments for and against CCS are shifting. The public engagement professionals in the Network member projects are very aware of this and will continue to share their thoughts and lessons and collaborate to create tools that not only help advance their projects, but further CCS projects as well.