

**EUROPEAN COMMISSION
DG RESEARCH**

**SEVENTH FRAMEWORK PROGRAMME
THEME 5 - Energy
ENERGY.2010.5.2-1: CCS - storage site characterisation**

Collaborative Project– GA No. 256705



**SiteChar
Characterisation of European CO₂ storage**

**Deliverable N° D9.7
Publications**

Deliverable No.	SiteChar D9.7	
Deliverable Title	Publications	
Nature	Report	
Dissemination level	Public	
Lead Beneficiary	IFPEN	
Written By	F. Delprat-Jannaud and the whole SiteChar project	
Due date	30/12/13	Delivered on 27 December 2013



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1 Publications

Three papers have already been published in international scientific journals:

BRUNSTING S., POL M., MASTOP J., KAISER M., ZIMMER R., SHACKLEY S., MABON L., HOWELL R., HEPPLWHITE F., LOVERIDGE R., MAZUROWSKI M. and RYBICKI C., 2013. Social Site Characterisation for CO₂ storage operations to inform public engagement in Poland and Scotland, *Energy Procedia*, vol. 37, 7327-7336.

<http://www.sciencedirect.com/science/article/pii/S1876610213009144>

NEELE F., DELPRAT-JANNAUD F., VINCKÉ O., VOLPI V., NEPVEU M., HOFSTEE C., WOLLENWEBER J., LOTHE A., BRUNSTING S., PEARCE J., BATTANI A., BARONI A. and GARCIA B., 2013. The SiteChar approach to efficient and focused CO₂ storage site characterisation, *Energy Procedia*, vol. 37, 4997-5005.

<http://dx.doi.org/10.1016/j.egypro.2013.06.413>

<http://www.sciencedirect.com/science/article/pii/S1876610213006565>

PEARCE J., HANNIS S., KIRBY G., DELPRAT-JANNAUD F., AKHURST M., NIELSEN C., FRYKMANN P. and DALHOFF F., 2013. How to submit a CO₂ storage permit: Identifying appropriate geological site characterisation to meet European regulatory requirements, *Energy Procedia*, vol. 37, 7783-7792.

<http://www.sciencedirect.com/science/article/pii/S1876610213009685>

A special of the OGST journal dedicated to SiteChar is in preparation for a publication of the special issue early 2015.

Some papers have already been submitted:

BEAUBIEN S., RUGGIERO L., ANNUNZIATELLIS A., BIGI S., CIOTOLI G., DEIANA P., GRAZIANI S., LOMBARDI S. and TARTARELLO M., 2015. Continuous and discontinuous monitoring of near surface CO₂ concentration and flux at a representative northern European site to define site-specific baseline thresholds for CCS monitoring as a function of land-use and season: the SiteChar research at the Voulund Farm, central Denmark. *Submitted to the OGST journal*.

BEKRI S., RENARD S. and DELPRAT-JANNAUD F., 2015. Study of permeability changes during injection. *Submitted to the OGST journal*.

GRUSON J.F., SERBUTOVIEZ S., DELPRAT-JANNAUD F., AKHURST M., NIELSEN C., DALHOFF F., BERGMO P., BOS C., VOLPI V. and IACOBELLIS S., 2015. Techno-economic assessment of four CO₂ storage sites. *Submitted to the OGST journal*.

KAISER M., ZIMMER R., BRUNSTING S., MASTOP J., SHACKLEY S. and MABON L., CCS acceptability: social site characterization and advancing awareness at prospective storage sites in Poland and Scotland. *Submitted to the OGST journal*.

KEMPKA T., NIELSEN C., SHI J.Q., BACCI G. and DALHOFF F., 2015. Coupled hydro-mechanical simulations of CO₂ storage supported by pressure management demonstrate synergy benefits of concurrent fluid extraction from the storage formation. *Submitted to the OGST journal*.

NEPVEU M., NEELE F., DELPRAT-JANNAUD F., AKHURST M., VINCKÉ O., VOLPI V., LOTHE A., BRUNSTING S., PEARCE J., BATTANI A., BARONI A., GARCIA B., HOFSTEE C. and



WOLLENWEBER J., 2015. CO₂ storage feasibility: a workflow for site characterization. *Submitted to the OGST journal.*

Some are in preparation (exact title and list of authors to be confirmed):

AKHURST M. *et al.*, 2015. Risk-led characterisation of a site for the geological storage of CO₂. *In preparation for the OGST journal.*

BARONI A., ESTUBLIER A., VINCKE O., NAUROY J.F. and DELPRAT-JANNAUD F., 2015. Dynamic fluid flow and geomechanical coupling to assess the CO₂ storage integrity in faulted structures. *In preparation for the OGST journal.*

DELPRAT-JANNAUD F., AKHURST M., PEARCE J., NIELSEN C., LOTHE A., VOLPI V., BRUNSTING S. and NEELE, F., 2015. The SiteChar project outcomes. *In preparation for the OGST journal.*

LOTHE A. *et al.*, 2015. Basin modelling approach. *In preparation for the OGST journal.*

NIELSEN C. and FRYKMAN F., 2015. How to characterize a potential site for GCS with sparse data coverage - Vedsted a Danish onshore site case. *In preparation for the OGST journal.*

PAPIERNIK B., DOLIGEZ B. and KLIMKOWSKI K., 2015. Structural and parametric models of the Załęcze and Żuchłów gas fields region, Fore-Sudetic Monocline, Poland. *In preparation for the OGST journal.*

PEARCE J. *et al.*, 2015. Permitting process. *In preparation for the OGST journal.*

RENARD S., BEKRI S., and DELPRAT-JANNAUD F., 2015. Core-scale modelling of a reactive flow experiment in a carbonate sandstone. *In preparation for the OGST journal.*

SHI J.Q. *et al.*, Assessment of pre-injection caprock fracture percolation and CO₂ injection induced geomechanical stability. *In preparation for the OGST journal.*

VOLPI V. *et al.*, 2015. Evaluation and characterization of potential CO₂ storage site in the South Adriatic offshore.

A number of SiteChar reports are public and available at <http://www.sitechar-CO2.eu/>

BRUNSTING S., POL M., PAUKOVIC M., KAISER M., ZIMMER R., SHACKLEY S., MABON L., HEPPLWHITE F., LOVERIDGE R., MAZUROWSKI M., POLAK-OSINIAK D. and RYBICKI C., 2011. Qualitative and quantitative social site characterisations – SiteChar Report D8.1.

BRUNSTING S., MASTOP J., POL M., KAISER M., ZIMMER R., SHACKLEY S., MABON L. and HOWELL R., 2012. Trust building and raising public awareness – SiteChar Report D8.2.

BRUNSTING S., MASTOP J., KAISER M., ZIMMER R., SHACKLEY S., MABON L. and HOWELL R., 2012. Public outreach activities – SiteChar Report D8.3.

BRUNSTING S., MASTOP J., KAISER M. and ZIMMER R., 2013. Quantitative social site characterisations – SiteChar Report D8.4.

BRUNSTING S., MASTOP J., KAISER M. and ZIMMER R., 2013. Final summary report on public awareness – SiteChar Report D8.5.

DELPRAT-JANNAUD F., AKHURST M., PEARCE J., NIELSEN C., LOTHE A., VOLPI V., BRUNSTING S. and NEELE, F., 2013. Characterisation of storage sites: synthesis and lessons learned from the application of the SiteChar workflow – SiteChar Report D2.1.

DELPRAT-JANNAUD F., PEARCE J., AKHURST M. and NIELSEN C., 2013. Characterisation of storage sites: Best practices and Guidelines developed from the SiteChar project – SiteChar Report D2.4.



Document No.
Issue date
Dissemination Level
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SiteChar D9.6
27/12/13
Public
5/7

NEELE F., DELPRAT-JANNAUD F., VINCKÉ O., VOLPI V., NEPVEU M., HOFSTEE C., WOLLENWEBER J., LOTHE A., BRUNSTING S., PEARCE J., BATTANI A., BARONI A., GARCIA B., and AKHURST M., 2013. SiteChar characterisation workflow – SiteChar Report D1.4.

A SiteChar public report is in preparation and will be published in January 2014:

VERCELLI S., BEAUBIEN S., LOMBARDI S., MODESTI F. and BIGI S., 2013. Report in lay terms – SiteChar Report D9.2.



2 Presentations at international conferences

Several presentations of the project or of specific activities have been given at international conferences, either as oral presentations or as posters:

- DELPRAT-JANNAUD F., VINCKÉ O., AKHURST M., BRUNSTING S., FRYKMAN P., LOTHE A., MARUZOWSKI M., NEELE F., VERCELLI S. and VOLPI V., 2011. SiteChar - Characterisation of European CO₂ storage, EGU-European Geosciences Union General Assembly, Vienna (Austria), April 2011.
- DELPRAT-JANNAUD F., VINCKÉ O., AKHURST M., BRUNSTING S., FRYKMAN P., LOTHE A., MARUZOWSKI M., NEELE F., VERCELLI S. and VOLPI V., 2011. SiteChar – A EU project dedicated to the characterisation of European CO₂ storage sites, CO₂NET Annual Seminar, London (UK), May 2011.
- BRUNSTING S., 2011. Lessons from Barendrecht Applied: Social Site Characterisation of Potential CCS Sites, INCLUESEV workshop about governance issues around CCS, London (UK), October 2011.
- DELPRAT-JANNAUD F. and PEARCE J., 2012. SiteChar: Overview and storage permit dry-runs, CO₂GeoNet Open Forum, Venice (Italy), April 2012.
- BRUNSTING S., 2012. Social Site Characterisation of Potential CCS Sites in Poland and the UK, 3rd Social Research Network meeting, Noosa Heads (Australia), April 2012.
- DELPRAT-JANNAUD F., Le projet FP7 SiteChar, 3^{ème} Colloque franco-espagnol sur le stockage géologique du CO₂, October 2012, Orléans (France).
- BRUNSTING S., POL M., MASTOP J., KAISER M., ZIMMER R., SHACKLEY S., MABON L., HOWELL R., HEPPLWHITE F., LOVERIDGE R., MAZUROWSKI M. and RYBICKI C., 2012. Social Site Characterisation for CO₂ storage operations to inform public engagement in Poland and Scotland, GHGT11, Kyoto (Japan), November 2012.
- NEELE F., DELPRAT-JANNAUD F., VINCKÉ O., VOLPI V., NEPVEU M., HOFSTEE C., WOLLENWEBER J., LOTHE A., BRUNSTING S., PEARCE J., BATTANI A., BARONI A. and GARCIA B., 2012. The SiteChar approach to efficient and focused CO₂ storage site characterisation, GHGT11, Kyoto (Japan) November 2012.
- PEARCE J., HANNIS S., KIRBY G., DELPRAT-JANNAUD F., AKHURST M., NIELSEN C., FRYKMANN P. and DALHOFF F., 2012. How to submit a CO₂ storage permit: Identifying appropriate geological site characterisation to meet European regulatory requirements, GHGT11, Kyoto (Japan), November 2012.
- DELPRAT-JANNAUD F., 2013. Key learnings from storage site selection and characterisation Where do the gaps remain? Results from CGS Europe and SiteChar, CO₂GeoNet Open Forum, Venice (Italy), April 2013.
- PEARCE J., 2013. SiteChar: demonstrating safe and permanent storage before injection begins, CO₂GeoNet Open Forum, Venice (Italy), April 2013.
- KAISER M., 2013. Socially balanced development of CCS pilot projects, CO₂GeoNet Open Forum, Venice (Italy), April 2013.
- KUMMEROW J., SPANGENBERG E., NAUMANN R. and WILKE F., 2013. CO₂ - Fluid - Rock interaction and its impact on petrophysical properties of reservoir rock samples, EGU-European Geosciences Union General Assembly, Vienna (Austria), April 2013.

- TILLNER E., KEMPKA T., SHI J.Q., BACCI G., NIELSEN C., FRYKMAN P. and DALHOFF F., 2013. Coupled dynamic flow and geomechanical simulations for an integrated assessment of CO₂ storage impacts in a saline aquifer, EGU-European Geosciences Union General Assembly, Vienna (Austria), April 2013.
- KAISER M., 2013. The implementation of CCS projects in Poland How to communicate with the local public? 12th Annual CCUS Conference, Pittsburg (USA), May 2013.
- KAISER M., The implementation of CCS projects in Poland How to communicate with the local public? 7th CCS Conference, Trondheim (Norway), June 2013.
- RINNA J., GRØVER A., FRYKMAN P., PLUYMAEKERS M., SHI J.Q., VOLPI V. and LOTHE A.E., 2013. Characterization of a potential CO₂ storage site offshore mid Norway using migration modelling tools on a basin-wide scale. 7th CCS Conference, Trondheim (Norway), June 2013.
- ORLIC B., MAZUROWSKI M., PAPIERNIK P. and NAGY S., 2013. Assessing the geomechanical effects of CO₂ injection in a depleted gas field in Poland by field scale modeling, EUROCK 2013, Wroclaw (Poland), September 2013.
- PEARCE J., AKHURST M., NIELSEN C., and DELPRAT-JANNAUD F., 2013. SiteChar – Defining appropriate geological site characterisation to meet European regulatory requirements, CO₂CARE Final Conference, Potsdam (Germany), November 2013.
- DELPRAT-JANNAUD F., PEARCE J., NEELE F., AKHURST M., NIELSEN C., MAZUROWSKI M., LOTHE A. and VOLPI V., 2013. SiteChar – Workflows for the characterisation of European CO₂ storage sites, CO₂CARE Final Conference, Potsdam (Germany), November 2013.

Some presentations have been accepted to forthcoming conferences either as oral presentations or as posters:

- AKHURST M., QUINN M., DELPRAT-JANNAUD F., BOSSIE-CODREANU D., HANNIS S., LECOMTE J-C., MCCORMAC M. and FRYKMAN P., 2014. Risk assessment-led pre-characterisation of a multi-store site for commercial injection of CO₂, Fourth EAGE CO₂ Geological Storage Workshop, Stavanger (Norway), April 2014.
- BÉKRI S., RENARD S. and DELPRAT-JANNAUD F., 2014. Pore-scale modelling to simulate reactive flow in porous media., Fourth EAGE CO₂ Geological Storage Workshop, Stavanger (Norway), April 2014.
- DELPRAT-JANNAUD F., PEARCE J., NEELE F., AKHURST M., NIELSEN C., MAZUROWSKI M., LOTHE A., VOLPI V. and BRUNSTING B., 2014. SiteChar – Workflow for fit-for-purpose characterisation of CO₂ storage sites in Europe, Fourth EAGE CO₂ Geological Storage Workshop, Stavanger (Norway), April 2014.
- NIELSEN C., FRYKMAN P. and DALHOFF F., 2014. Impact on storage complex delineation from injection-induced pressure propagation, Fourth EAGE CO₂ Geological Storage Workshop, Stavanger (Norway), April 2014.
- VOLPI V., FORLIN E., BARONI A., ESTUBLIER A., DONDA F., CIVILE D., VINCKE O. and DELPRAT-JANNAUD F., 2014. Evaluation and characterization of potential CO₂ storage site in the South Adriatic offshore, Fourth EAGE CO₂ Geological Storage Workshop, Stavanger (Norway), April 2014.

Some abstracts for forthcoming conferences are in preparation:

- MABON C. *et al.*, 2014. presentation at the 4th social research network meeting in Calgary, Canada – *details to be announced.*