

INCONTRO TECNICO DELL'OSSERVATORIO NAZIONALE DEI CONTRATTI DI FIUME

LA PARTECIPAZIONE NELLA GESTIONE DEI CORPI IDRICI

Il coinvolgimento dei portatori di interesse nei Contratti di Fiume

Roma, 9 aprile 2019

PSICOLOGIA AMBIENTALE

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Sapienza Università di Roma, CIRPA Centro Interuniversitario di Ricerca in Psicologia Ambientale



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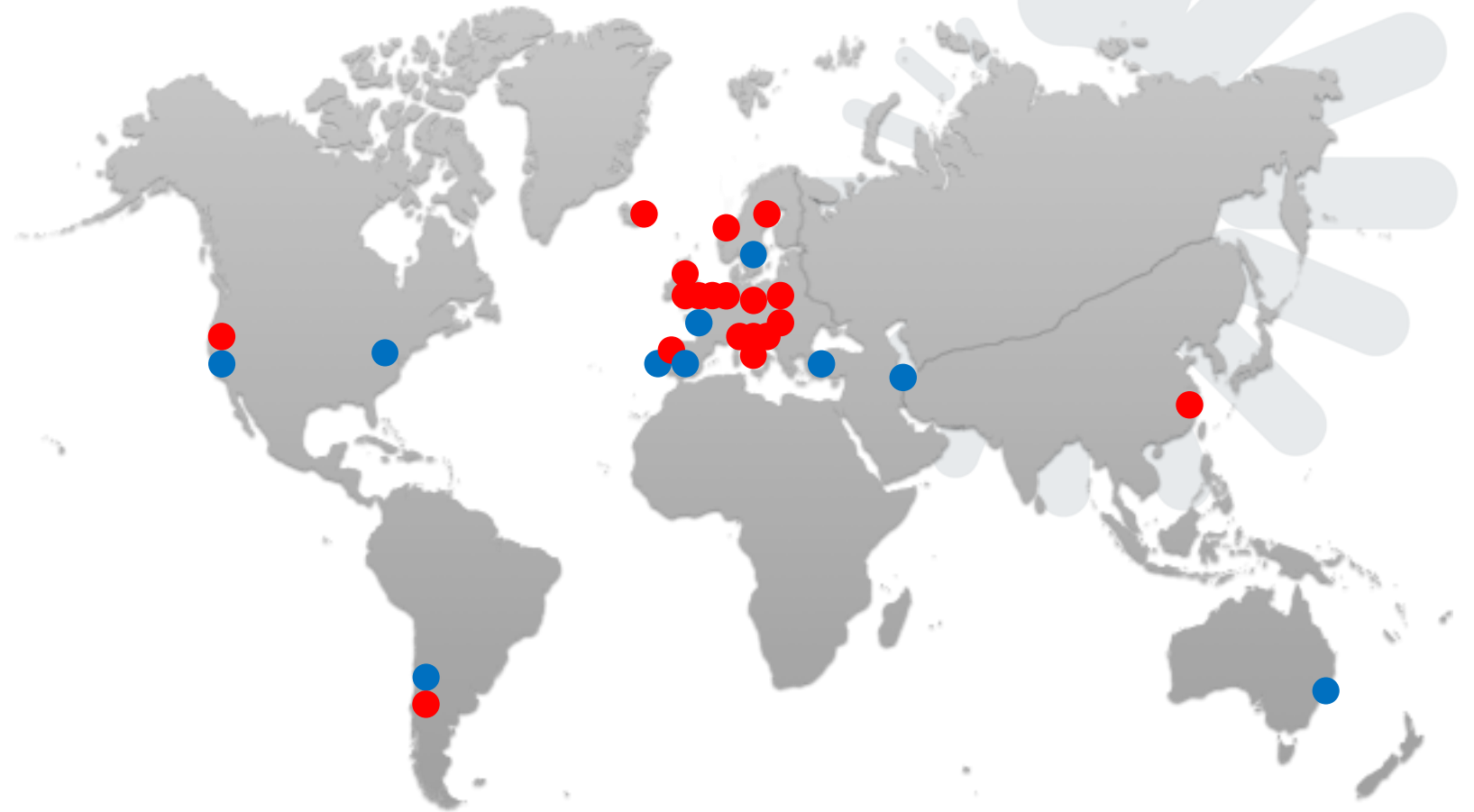
Università degli Studi di Napoli Federico II



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CIRPA collaborazioni attuali nel mondo

Finanziate e Non finanziate



Relazioni reciproche tra persona e ambiente

Psicologia architettonica e Psicologia ambientale

Corral-Verdugo, 2012, EDS

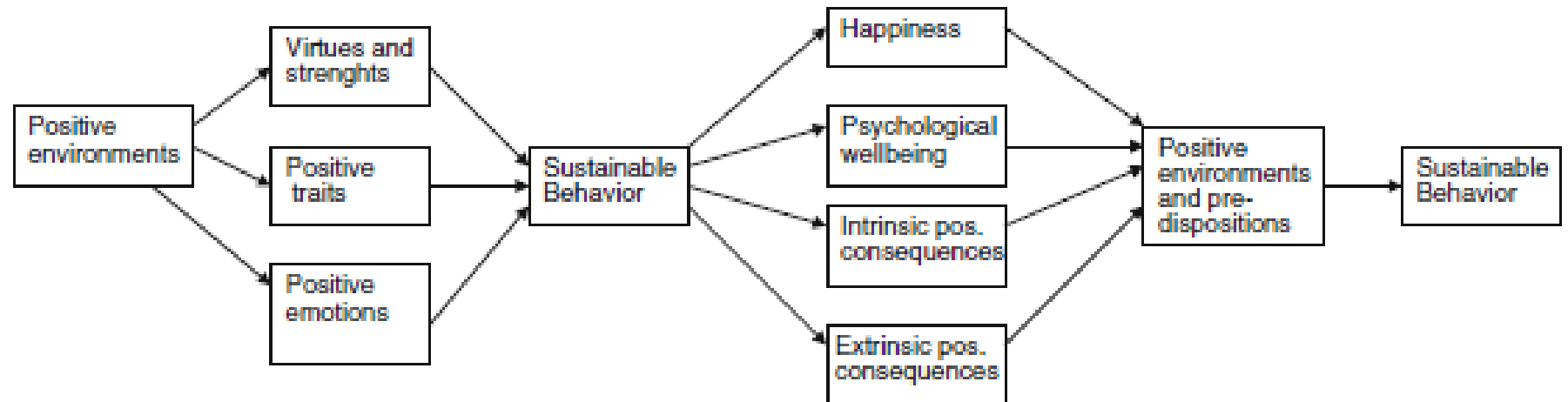


Fig. 1 A model of sustainable behavior *instigated* by positive situational and psychological antecedents and *maintained* by positive psychological consequences

- “How a positive environment can create a positive person”
- “How a positive person can create a positive environment”



SPECIAL FEATURE: ORIGINAL ARTICLE



Sense of place in social-ecological systems: From theory to empirical exploration

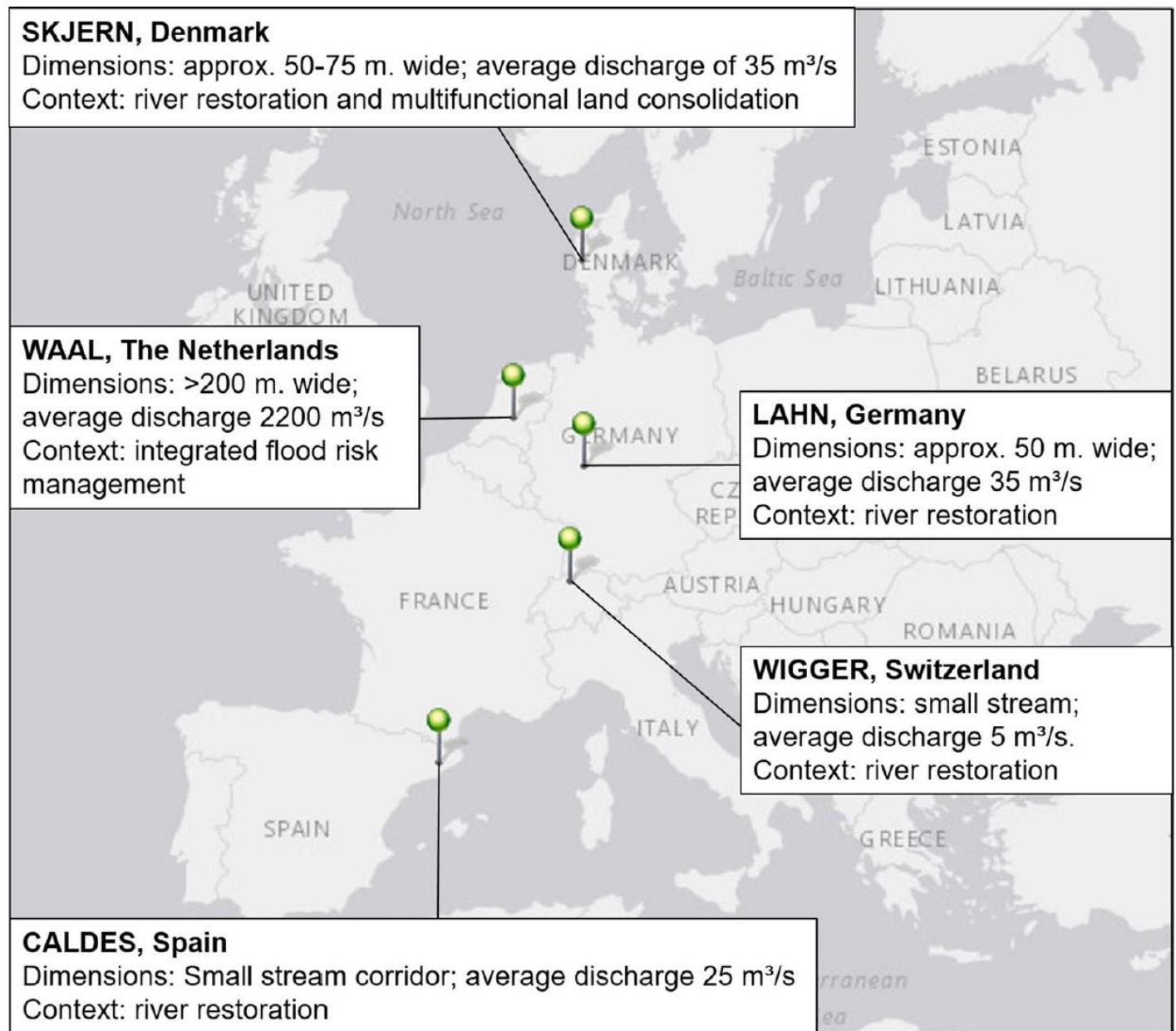
Integrating sense of place in planning and management of multifunctional river landscapes: experiences from five European case studies

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Fig. 1 Location and main characteristics of the case study areas



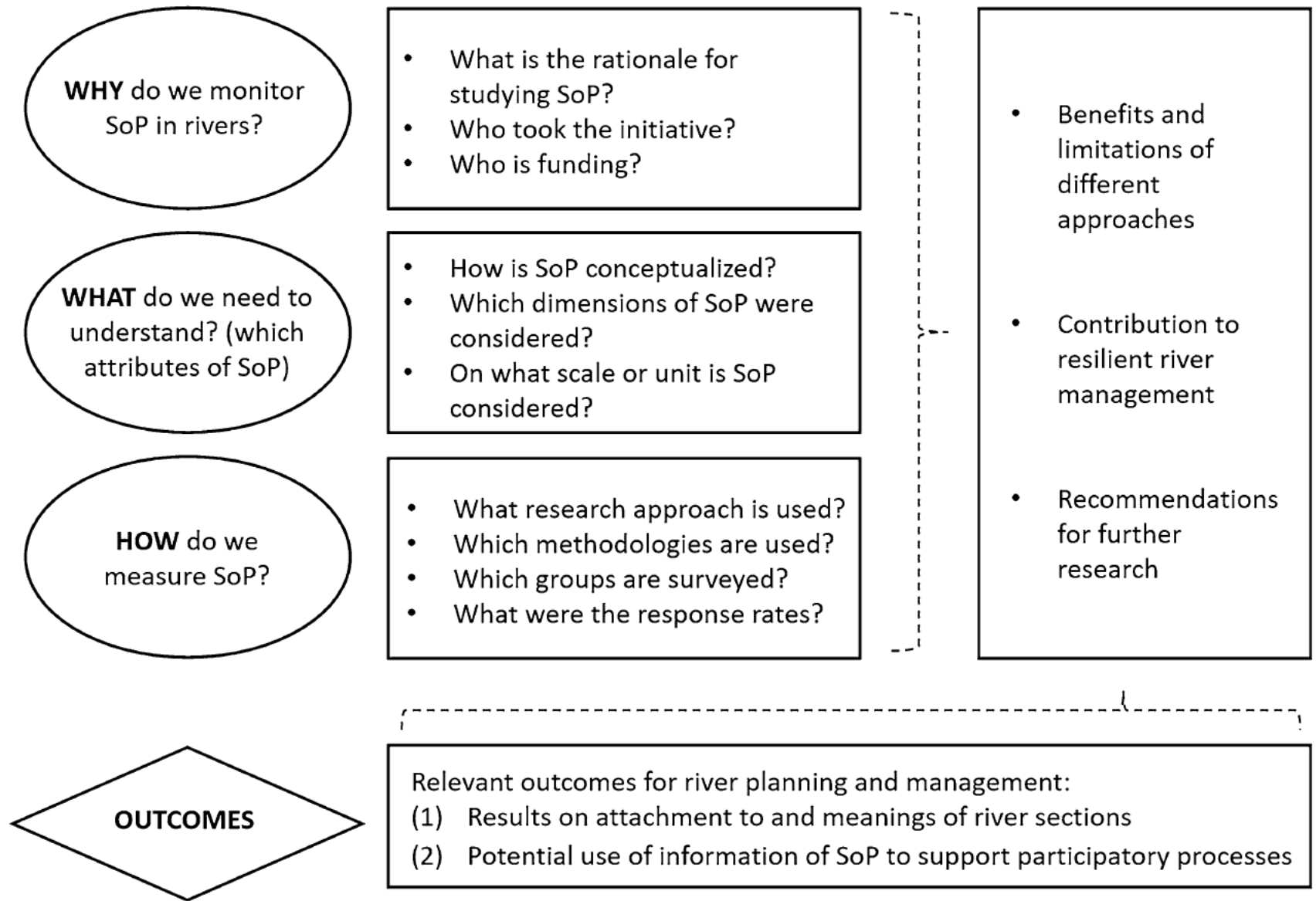


Table 1 Summarized case study results, including (1) motivations and drivers for studying sense of place (SoP), (2) conceptualization and attributes of SoP considered, and (3) methods and tools for measuring SoP. More detailed descriptions of the case studies are available in the Supplementary Material (ESM1)

	Caldes	Lahn	Skjern	Waal	Wigger
<i>Why—motivations and drivers for measuring SoP</i>					
Rationale	Eliciting positive and negative landscape values in relation to improvement preferences	Mapping of meaningful places to support river landscape planning	Mapping of places for nature-based recreation	Role of place attachment in public support for river intervention	Role of residents' relationship to place in public support of different river scenarios
Initiator	Researchers	State/government	Partnership ^a	Partnership ^a	Cantonal administration
Funding source	Foundation	State/government	Foundation	National research funding	Cantonal administration
<i>What—conceptualization of SoP</i>					
Scope	Landscape values	Meaningful places	Recreational value	Landscape values	Recreational value
Main concepts	Place attachment and place meanings	Place attachment and place meanings	Place attachment (collective sense of place)	Place attachment	Place attachment and place meanings
Attributes	Special places that foster sense of attachment or identity	Place identity Place dependence Place affect	Place identity Place dependence Most visited places	Place identity Place dependence Social bonding Nature bonding Narrative bonding	Attachment to the whole river Attachment to municipality Meaning of river section Recreation places Favorite locations Favorite recreation routes
Attachment to/ meaning of (unit)	Mapped locations	Mapped locations	Mapped locations	River section	Whole river River section Municipality
<i>How—methods and tools for measuring SoP</i>					
Type of research	Qualitative	Quantitative ^b	Quantitative	Quantitative	Quantitative
Method	PPGIS interviews	Web based PPGIS surveys	Web based PPGIS surveys	Postal surveys Web based surveys	Postal PPGIS surveys Class room PPGIS surveys
Surveyed groups	Residents and stakeholders (<i>n</i> = 53)	Residents (<i>n</i> = 480)	Residents (<i>n</i> = 299)	Residents (<i>n</i> = 1102 and 880) Recreational anglers and boaters (<i>n</i> = 75 and 158)	Residents (<i>n</i> = 507 for long version and 272 for short version) Adolescents (<i>n</i> = 128)
Response rates	78%	10%	20%	22% (2014; residents only) 17% (2016; residents only)	21% (long version, residents) 27% (short version, residents) 55% (adolescents)

^a Here the state initiated the intervention but monitoring of recreational places/landscape values was decided upon collectively by a partnership with representatives from main organizational stakeholders (including for example the agricultural sector, nature NGOs, recreation NGOs, and public authorities)

^bThe questionnaire included one open question: why is this place meaningful to you?



PPGIS studies provided information about locations that people value, use often or that need improvement. In the study along the Skjern, 386 respondents mapped approximately 1000 places used for outdoor recreation. Places were mapped over a large area, hotspots being local woodlands, beaches, summerhouse areas and recreational harbours and the restored Skjern river valley (Figure S3 in ESM2). With about 25% of all mapped places, the river valley was the most popular single landscape element in the survey area among the respondents. This is remarkable considering that the river valley has only been accessible since the finalizing of the restoration project in 2002. A total of 780 mapped places included information on place dependence and place identity; however, there was no significant difference between these scores in the river valley compared to the other mapped hotspots (Table S4 in ESM2). But along the river, attachment scores were higher for sections of the river that were restored. Hence, the restored river valley constitutes an important collective sense of place hotspot adding to local peoples' identities and dependences, which supports a wide range of outdoor activities and outdoor recreation motives.



Results from the Lahn study (based on 1022 meaningful places located by 480 respondents) showed that meaningful places cluster around urban areas, rural areas, recreation areas as well as natural areas. The density of meaningful places was higher at rivers and lakes and in urban (green) areas when compared to agricultural areas and forests (Table S3 in ESM2). The frequency of meaningful places decreased with increasing distance from the river and its lakes (Gottwald and Albert 2018). The most often cited reason to mark a place as meaningful was that it enabled people to do a certain type of activity, such as biking, walking and canoeing. Other frequently mentioned reasons fall into the 'relational' category of Stephenson (2008) classifications (as opposed to 'forms' and 'practices'). Amongst these relationship-related meanings, aesthetics was mentioned most often, followed by well-being, friends and family, and memories. Mean scores for agreement with items within the place identity and place dependence dimensions showed that both are important but place identity had higher levels of agreement (3.75) than place dependence (3.50) (Table S2 in ESM2). For more than three-quarters of the mapped places (76.8%) respondents reported a willingness to take action to preserve this place (Table S2 in ESM2).



Deliverables 2.4

Stakeholders map for socio-economic evaluation

Project information

Grant Agreement n°	764089
Dates	1 st April 2018 – 31 st March 2022



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Revisions

Version:	Date:	Changed by:	Comments:
V1	03/24/19	C.I.R.P.A.	First Version
V1.1	03/29/19	C.I.R.P.A.	Second Version

Project identification

Grant Management No:	764089
Project acronym	ABC-Salt
Project title:	Advanced Biomass Catalytic Conversion to Middle Distillates in Molten Salts
Type of Action:	RIA
Topic:	LCE-06-2017 New knowledge and technologies
Start date of project:	1st April 2018
Duration:	48 months
Project Coordinator:	Rijksuniversiteit Groningen (RUG)

Distribution restricted to the ABC-Salt Consortium

Interest: the degree of involvement that the stakeholder has in the project (Mendelow, 1991).

Influence: the stakeholder's ability to affect the organization strategy or project resources (Mendelow, 1991).

- High power / low interest (**Keep satisfied**): Sufficient information must be provided to these stakeholders to ensure that they are up to date but not overwhelmed with data.
- High power / high interest (**Manage closely**): Stakeholders to be engaged by making the greatest effort.
- Low power / high interest (**Keep informed**): Stakeholders to keep informed in order to avoid major issues.
- Low power / low interest (**Monitor/Minimum effort**): Stakeholders to be provided with minimal communication.



FIGURE 2: POWER/INTEREST MATRIX (ADAPTED FROM MENDELOW, 1991)

1.9 Aims for D2.4 “Stakeholders map for socio-economic evaluation”

On the basis of the Introduction above and particularly of the chosen model for the stakeholders’ matrix, CIRPA led Task 2.5 can be summarized as follows:

- 1) *“Interest”* dimension computation: keywords extraction from ABC-Salt project contents, extraction of ABC-Salt project contents from Factiva and ProQuest online databases, application of the Structural Thematic Model to highlight the topics involved in ABC-Salt related contents and therefore to operationalize the score as the variational lower bound, i.e., index of fit between a stakeholder's content and the topic model.
- 2) *“Influence”* dimension computation: preliminary research of the ABC-Salt project stakeholders from the online database ETIP (European Technology and Innovation Platform), through the Twitter API, extraction of information from the specific identified stakeholders thus allowing the construction of a network based on mutual relations to allow the calculation of indegree Centrality indexes
- 3) *Matrix population*: stakeholders tracking within the corresponding quadrants of the *“Interest by Influence”* matrix, referring to EU and specifically to the ABC-Salt partners countries.



TERM FREQUENCY			
TERM	FREQUENCY	TERM	FREQUENCY
BIOFUEL	20	TRANSPORT	4
BIOMASS	16	ACTIVITY	3
RESEARCH	11	ADVANCE	3
MOLTEN SALT	10	CHAIN	3
ENERGY	9	CIRCULAR ECONOMY	3
FUEL	9	FEEDSTOCK	3
SUSTAINABLE	9	FLEXIBILITY	3
MIDDLE DISTILLATES	8	INNOVATION	3
TECHNOLOGY	7	INTEGRATION	3
BIOENERGY	6	LIQUEFACTION	3
HYDRO-PYROLYSIS	6	LOW CARBON	3
SUSTAINABILITY	6	SUITABLE	3
INDUSTRY	5	SUPPLY	3
CATALYTIC	4	TECHNICAL	3
INTEGRATE	4	TECHNO-ECONOMIC	3
LIQUID	4	TRANSNATIONAL	3
SYSTEM	4	USER	3

TABLE 3: KEYWORDS OCCURRENCE TABLE

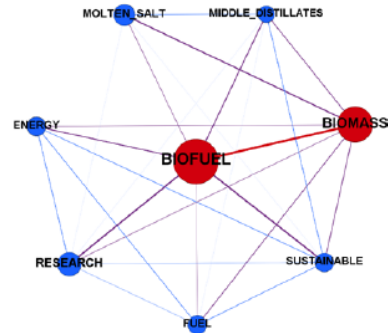


FIGURE 9: ABC-SALT KEYWORD NETWORK

Within the network, the size of the nodes (keywords) is directly proportional to the frequency of occurrence of the keyword, while the thickness of the lines is directly proportional to the frequency of each keywords couple co-occurrence.

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In Figure 17, the Topical prevalence graph with details of the labels attributed is re-proposed.

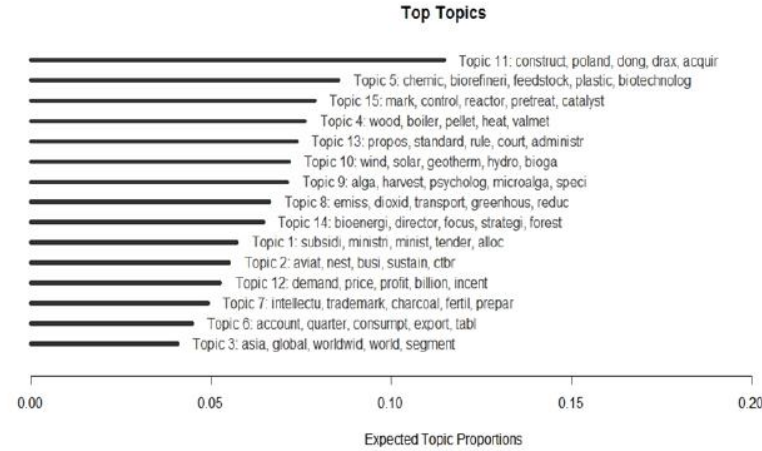


FIGURE 15: FIFTEEN TOPICS WITH A VARIABLE PREVALENCE IN THE CORPUS

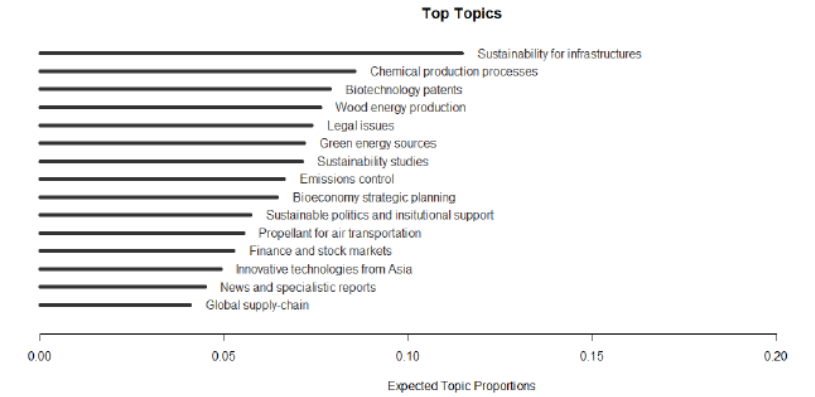


FIGURE 17: TOPICAL PREVALENCE GRAPH RE-PROPOSED SUBSEQUENTLY OBSERVED TERMS AND DOCUMENTS

The "Interest" dimension of the ABC-Salt's stakeholders is thus calculated through the adherence between the ABC-Salt-related topics and the stakeholder contents.

More in detail, the Interest score is operationalized as the variational lower bound (ELBO), used as index of fit between a stakeholder's content and the topic model.

Sustainability for infrastructures DOCS

Enel Green Power, SECI Energia to develop Italian biomass power project. Italian renewable energy companies Enel Green Power and SECI Energia will develop a new 30MW biomass power project in the town of Russi, near Ravenna in Italy. Italian renewable energy companies Enel Green Power and SECI Energia will develop a new 30MW biomass power project in the town of Russi, near Ravenna in Italy.

Danish JV opens 40 MW straw fired power plant in UK. May 26 SeeNews A Danish joint venture today opened the Binog Renewable Energy Plant, a 40 MW straw fired biomass power plant in North Lincolnshire, the UK. The GBP 162 million USD 238m EUR 213m facility is owned by BWSC North Lincs Ltd, a joint venture between PensionDanmark, power plant specialist Burmeister & Wain Scandinavian Contractor A S BWSC and Copenhagen Infrastructure Partners CIP. It was officially opened by North Lincolnshire mayor Trevor Foster, PensionDanmark said.

FIGURE 16: MOST REPRESENTATIVE DOCUMENTS

4 Results

The adopted procedure makes possible to map the potential stakeholders of ABC-Salt project in terms of two selected dimensions: *Interest* and *Influence*.

However, due to the lack of online material on many organizations, the total dataset shrank to 239 stakeholders.

4.1 Aim 1: Interest computation

The Interest score ELBO (Evidence Lower Bound), of each stakeholder has been standardized in "ELBO_STD" and ranked from the highest score to the lowest. In Table 4, Interest scores for each stakeholder are listed.

RANK	NAME	COUNTRY	ELBO	ELBO_STD
1	Università degli Studi di Firenze	Italy	-7,620	0,667
2	Università degli Studi di Udine	Italy	-7,620	0,667
3	PROLEA	France	-8,704	0,666
4	TECNALIA Energy	Spain	-13,670	0,658
5	Norwegian University of Science and Technology NTNU	Norway	-16,971	0,653
6	University of Applied Sciences (HSR)	Switzerland	-17,641	0,652
7	SLU – Unit for Field-Based Forest Research	Sweden	-22,565	0,645
8	University College Dublin	Ireland	-22,724	0,644
9	State Secretariat for Education and Research	Switzerland	-25,319	0,641
10	Neste Oil	Finland	-38,173	0,621
11	Perstorp	Sweden	-38,952	0,620
12	PKN Orlen (Polski Koncern Naftowy S.A.)	Poland	-40,089	0,618
13	Energy Technologies Institute	United Kingdom	-40,257	0,618
14	ONERA	France	-45,254	0,610
15	Petroleum Industry of Serbia – NIS	Serbia	-45,370	0,610
16	Technology Strategy Board	United Kingdom	-48,241	0,606
17	Sustainable Energy Ireland	Ireland	-49,636	0,604
18	OMV Aktiengesellschaft	Austria	-49,937	0,603
19	Quality Assurance Poland	Poland	-53,175	0,598
20	University of Southern Denmark	Denmark	-53,708	0,598
21	Ford Forschungszentrum Aachen GmbH	Germany	-54,178	0,597
22	North-West Croatia Regional Energy Agency	Croatia	-56,204	0,594
23	Newcastle University	United Kingdom	-58,114	0,591
24	Pöyry Finland Oy	Finland	-59,630	0,589
25	Finnish Forestry Industries Federation	Finland	-62,991	0,583
26	National University of Ireland	Ireland	-63,150	0,583

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224	Caterpillar Motoren GmbH & Co. KG	Germany	1517,898	-1,621
225	BIOPLAT – Spanish Biomass Technology Platform	Spain	1564,084	-1,691
226	BLC3 Association – Technology and Innovation Campus	Portugal	1629,519	-1,790
227	Bellona Organisation	Belgium	1692,239	-1,885
228	ARGO S.r.l.	Italy	1694,982	-1,889
229	Cargill	Belgium	1712,573	-1,916
230	Avantium Technologies BV	Netherlands	1810,735	-2,064
231	CENER National Centre for Renewables Energies – Department of Solar Power	Spain	1851,132	-2,126
232	Centre for Process Innovation	United Kingdom	1999,344	-2,350
233	BP	United Kingdom	2154,501	-2,585
234	Confederation of European Forest Owners	Belgium	2410,481	-2,973
235	BUNGE	France	2529,355	-3,153
236	Bureau Veritas	France	2611,509	-3,278
237	CenBio	Norway	2718,512	-3,440
238	BSR Sustainability GmbH	Denmark	3235,621	-4,223
239	Copa – Cogeca	Belgium	6326,273	-8,905

TABLE 4: INTEREST SCORES FOR EACH STAKEHOLDER

- 👉 Following (A follows B)
- 👉 Retweeting (A retweet B)
- 👉 Mentioning (A mentions B)

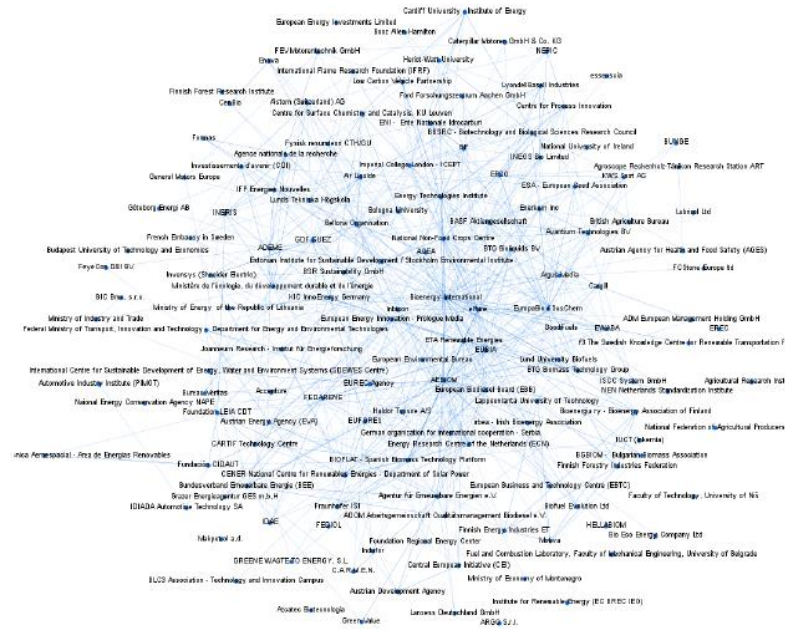


FIGURE 18: ABC-SALT STAKEHOLDERS NETWORK

The influence score is operationalized using the Indegree Centrality index standardized score of each node (stakeholder):

$$C_i = deg^-(x) \quad x \in V$$

Where x represents a generic node of V and deg^- is the number of incoming arcs.



4.2 Aim 2: Influence computation

The Influence score (INDEGREE) of each stakeholder has been standardized in "IND_STD" and ranked from the highest score to the lowest. In Table 5, Influence scores for each stakeholder are listed.

RANK	NAME	COUNTRY	INDEGREE	IND_STD
1	Bioenergy International	Sweden	52	4,673
2	Shell Global Solutions International BV	Netherlands	50	4,450
3	TOTAL	France	47	4,117
4	AEBIOM	Belgium	42	3,561
5	BASF Aktiengesellschaft	Germany	41	3,450
6	Climate-KIC Central Hungary Region	Hungary	39	3,228
7	Neste Oil	Finland	34	2,672
8	Technical Research Center of Finland (VTT)	Finland	33	2,561
9	ePure	Belgium	32	2,450
10	EuropaBio / SusChem	Belgium	31	2,339
11	EUBIA	Belgium	27	1,895

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216	Automotive Industry Institute (PIMOT)	Poland	1	-0,994
217	Azcatec Biotecnologia	Spain	1	-0,994
218	Booz Allen Hamilton	United Kingdom	1	-0,994
219	Budapest University of Technology and Economics	Hungary	1	-0,994
220	Czech University of Life Sciences	Czech Republic	1	-0,994
221	EREC	Belgium	1	-0,994
222	European Energy Investments Limited	United Kingdom	1	-0,994
223	FEDIOL	Belgium	1	-0,994
224	FeyeCon D&I BV	Netherlands	1	-0,994
225	Fuel and Combustion Laboratory, Faculty of Mechanical Engineering, University of Belgrade	Serbia	1	-0,994
226	IUCT (Inkemia)	Spain	1	-0,994
227	Ministry of Economy of Montenegro	Montenegro	1	-0,994
228	National Federation of Agricultural Producers	Moldova	1	-0,994
229	Norsk Hydro ASA	Norway	1	-0,994
230	North Regional Development Agency	Moldova	1	-0,994
231	Norton Rose LLP	United Kingdom	1	-0,994
232	Petroleum Industry of Serbia - NIS	Serbia	1	-0,994
233	SE de Carburos Metálicos S.A.	Spain	1	-0,994
234	StrategicFit	United Kingdom	1	-0,994
235	University of Leeds	United Kingdom	1	-0,994
236	University of Lleida	Spain	1	-0,994
237	Vrije Universiteit Brussel (VUB)	Belgium	1	-0,994
238	Bio Eco Energy Company Ltd	Croatia	0	-1,106
239	Quality Assurance Poland	Poland	0	-1,106

TABLE 5: INFLUENCE SCORE FOR EACH STAKEHOLDER

STAKEHOLDER MAP - ITALY

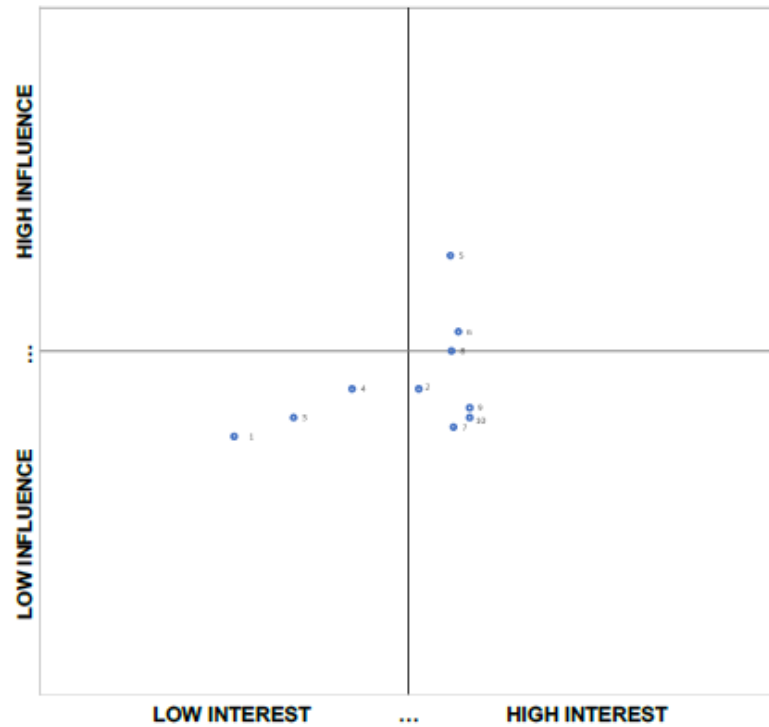


FIGURE 22: STAKEHOLDER MATRIX - ITALY

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4.3 Aim 3: Matrix Population

At last, all stakeholders are plotted in the corresponding quadrants of the *Interest by Influence* matrix. Below the mapping results by Country are plotted for each of the eight partners Countries. For each matrix, there is a table with the values of *Interest* (ELBO_STD) and *Influence* (IND_STD).

In Figure 19 and Table 6, all stakeholders from Belgium are listed.

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STAKEHOLDERS FROM ITALY			
LABEL	ORGANIZATION	INTEREST	INFLUENCE
1	ARGO S.r.l.	-1,889	-0,99449
2	Bologna University	0,11079	-0,4389
3	Central European Initiative (CEI)	-1,24681	-0,77225
4	Centro Ricerche Fiat (Fiat Powertrain Technologies)	-0,61268	-0,4389
5	ENI - Ente Nazionale Idrocarburi	0,4552	1,11677
6	ETA Renewable Energies	0,54131	0,22782
7	International Flame Research Foundation (IFRF)	0,49006	-0,88337
8	Technip Italy s.p.a	0,46743	0,00558
9	Università degli Studi di Firenze	0,66733	-0,66113
10	Università degli Studi di Udine	0,66733	-0,77225

TABLE 9: STAKEHOLDER'S INTEREST AND INFLUENCE SCORE – ITALY


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