

Transdisciplinary research on relationships between aquatic ecosystems & humans through a 'one health' perspective

Characterization of a socio-spatial approach

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1- LHAC, ENSA Nancy; 2- LIEC, UL; 3- BETA, INRAE; 4- EABX, INRAE; 5- La Vigie de l'eau



RÉPUBLIQUE
FRANÇAISE
Liberté
Égalité
Fraternité

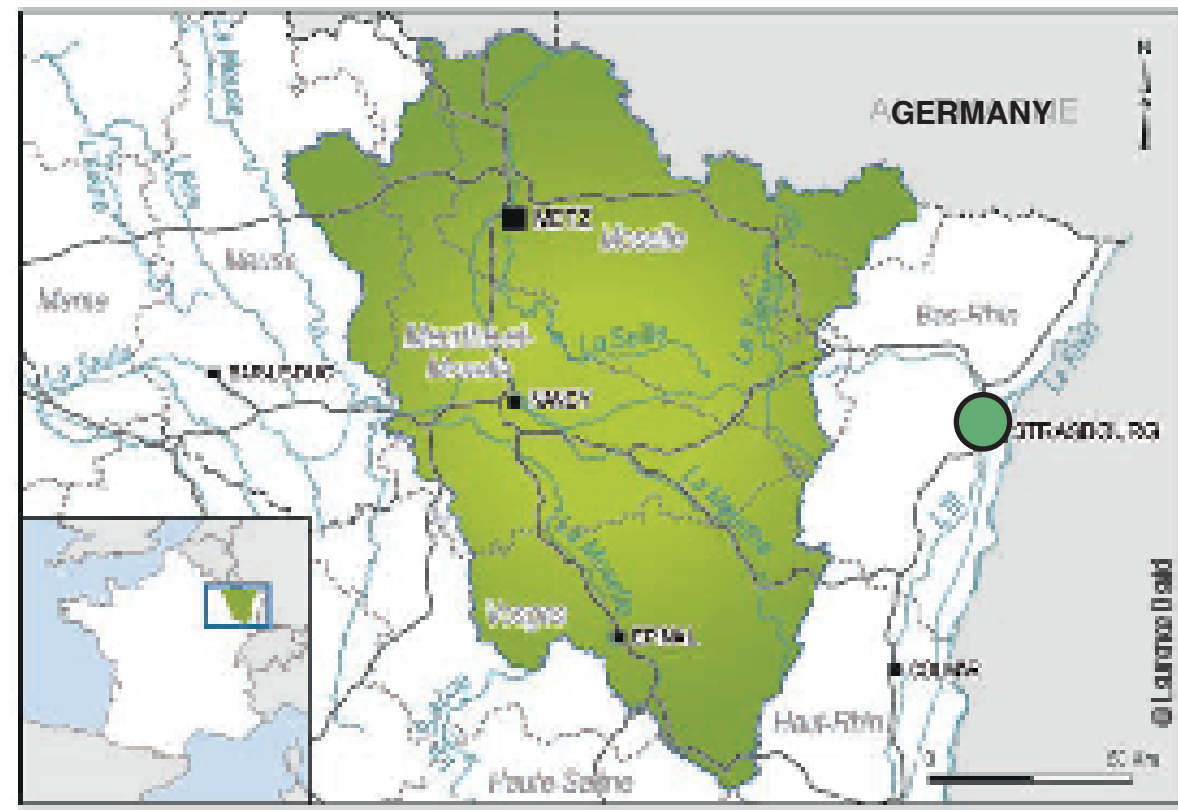
AGENCE
DE L'EAU
RHIN-MEUSE
a research financed by

Mental'eau

Global projet



two territories considered for the aquatic ecosystems, the Moselle catchment (ZAM) and the Strasbourg area (ZAEU), France



is there a link between aquatic ecosystems (AES) state of health and human health, considered through mental wellbeing?

one main research question

evaluation of AES state of health

a multiscale method, based on 36 descriptors and 23 indicators¹



Perceived Restorativeness Scale + Restorative Outcome Scale

a questionnaire for people who visit the study AES²

evaluation of the impact of frequentation of the AES on human well-being and mental health

socio-spatial approach for corollary questionings

QUANTITATIVE & QUALITATIVE METHODS

ANALYSE OF EXISTING DATA & DATA COLLECTED IN SITU

DATA PROCESSING IN CARTOGRAPHY

Socio-spatial approach for corollary questionings



Moselle River, Bainville-aux-M.



La Ballastière Gravel, Hagondange

CE1 Very big stream on East-region calcareous hillsides	Urban/Non-U.	Surface	Altitude	Township	Habitants	Terr. Type	Type of site	1A	1B	1C	2A	2B	3	4
La Moselle à Basse-Ham	Non-urban	0.5 km l.	150	Basse-Ham	2200*	b	Mono							
La Moselle à Maron	Non-urban	0.5 km l.	216	Maron	850	a	Mono							
La Moselle à Epinal	Non-urban	0.5 km l.	320	Epinal	32000	c	Mono							
CE2 Big stream on East-region calcareous hillsides	Urban	0.5 km l.	195	Nancy & Tomblaine	105160*	d	Mult							
La Meurthe à la Mèchelle	Non-urban	0.5 km l.	252	Bainville-aux-Miroirs	340	a	Mono							
La Moselle sauvage	Urban	0.5 km l.	181	Valleroy	2360	b	Mono							
CE3 Medium-sized stream on East-region calcareous hillsides	Non-urban	0.5 km l.	170	Metz	117500*	d	Mult							
La Selle	Non-urban	0.5 km l.	264	Mirecourt	5320	b	Mono							
Le Madon	Non-urban	0.5 km l.	264	Mirecourt	5320	b	Mono							
CE4 Very small stream on East-region calcareous hillsides	Urban	0.5 km l.	276	Villey-lès-Nancy	14500*	a	Mono							
L'Aenne	Urban	0.5 km l.	198	Nancy	105160*	d	Mono							
CE 5 Channel	Urban	0.5 km l.	198	Nancy	105160*	d	Mono							
Le port St George	Urban	0.5 km l.	212	Toul	16000	c	Mono							
Le port de Toul	Urban	0.5 km l.	212	Toul	16000	c	Mono							
Le port de Lagarde	Urban	0.5 km l.	234	Lagarde	190	a	Mono							
PE2 Calcareous plain gravel without littoral zone	Urban	0.21 km2	160	Hagondange	9280	c	Mono							
La ballastière	Urban	0.1 km2	166	Metz	117500*	d	Mult							
Le plan d'eau de Metz	Urban	0.2 km2	221	Messein	1880	b	Mono							
Le grand Etang Messein	Non-urban	0.1 km2	198	Villey-St-Etienne	1100	b	Mono							
Le pavillon Bleu	Non-urban	0.79 km2	235	Hoste	630	a	Mult							
PE3 Shallow and low-lying calcareous reservoir	Non-urban	15 km2	212	Lindre-Basse	230	a	Mono							
L'étang de Hoste Bas	Non-urban	0.7 km2	236	Diefenbach-lès-P.	3070	b	Mono							
L'étang de Diefenbach	Non-urban	13 km2	231	Nonsard-Lamarche	200	a	Mult							
Lac de Madine	Non-urban	8 km2	370	Pierre Percée	92	a	Mult							
Lac de Pierre Percée	Non-urban	0.56 km2	309	Celles-sur-Plaine	870	a	Mono							
Lac de la Plaine	Non-urban	0.94 km2	735	Xonrupt-Longemer	1540	b	Mono							
PE4 Deep non-calcareous mid-mountain lake	Non-urban	1.5 km2	683	Gérardmer	8300	b	Mult							
Lac de Longemer	Non-urban	0.7 km2	782	Xonrupt-Longemer	1540	b	Mono							
Lac de Gérardmer	Non-urban	0.11 km2	889	La Bresse	4200	b	Mono							
Lac de Retournemer	Non-urban													
Lac des Corbeaux	Non-urban													

Restricted corpus

ATTENDED USES & associated facilities	Type 1	Type 2	Type 3	Type 4
A Walks (on foot, by bike, etc.)	Water sports	Fishing	Bird/wildlife watching	
B Picnics, playing areas	Swimming			
C Camping				

Relation between visitors and the site : perceptions, practices and representations

How the sites are perceived by visitors? What are the tension between observed practices and intended uses?

What impact could have sensitization to the 'one health' concept have on its representations ?

- ° QUESTIONNAIRES (arr. 40 per site, main corpus)
- ° FOCUS GROUPS (arr. 3 per site, restricted corpus)
- ° OBSERVATIONS (main corpus)



After a 'serious game' on the topic cyanobacteria



Relation between visitors and territory: demographic, access and landscape context

What is the accessibility of the different sites ? And what is their demographic context ?

Is there a link between the landscape and typomorphological context of the site and its perception?

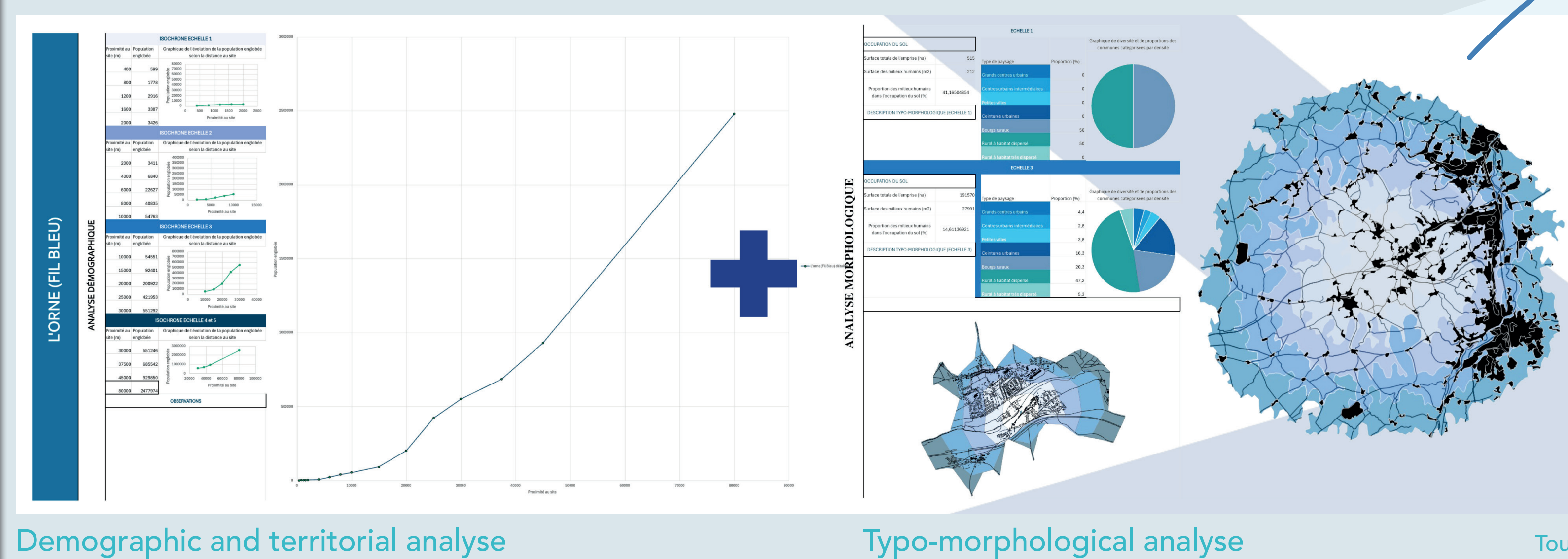
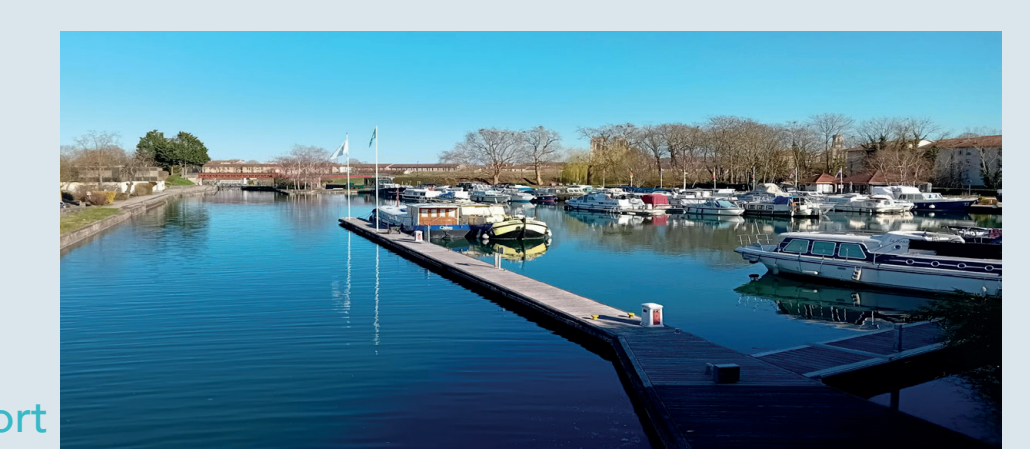
° CARTOGRAPHY & SOCIAL-TERRITORIAL ANALYSE (main corpus)

population pool
landscape
accessibility

GRADIENT OF
NATURALITY

FACILITIES ACCESSIBILITY

site selection based on various parameters, which importance for the well-being ?



Demographic and territorial analyse

Typo-morphological analyse

Toul Port

Point of view from different stakeholders: perspectives sketches for the sites

Regarding the 'one health' question, what are the points of view of different stakeholders?

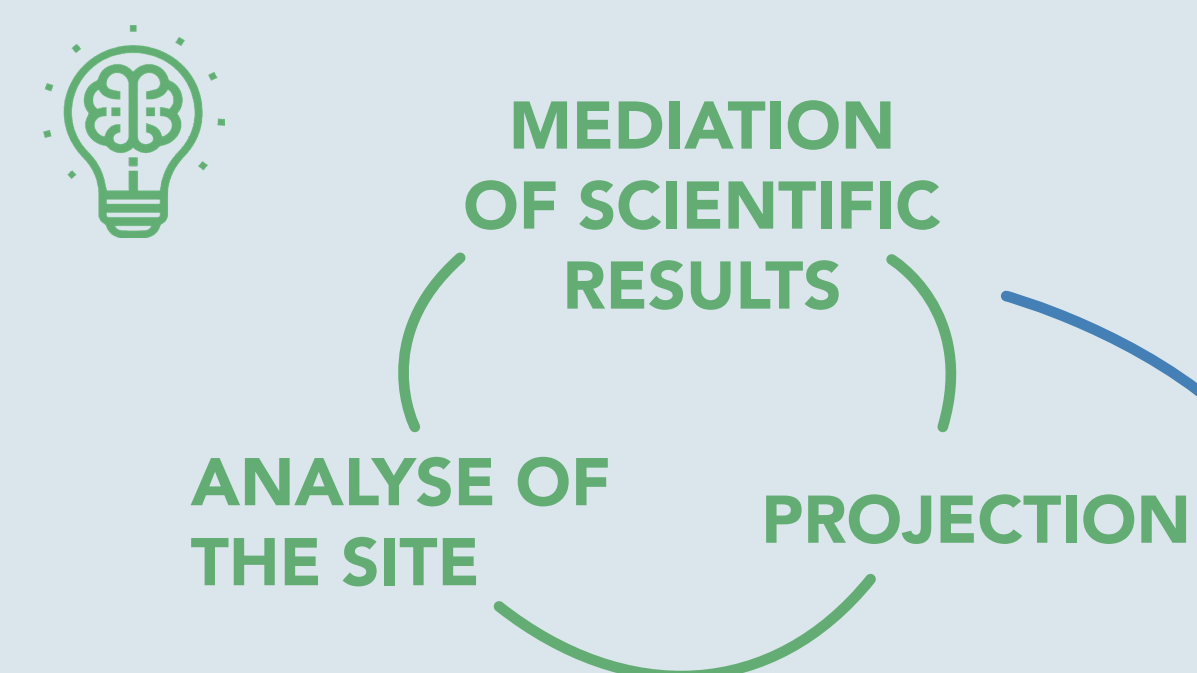
How can their evaluation of the situation impact the evolution of the different sites?

° SEMI-DIRECTIVE INTERVIEWS (arr. 6, restricted corpus)

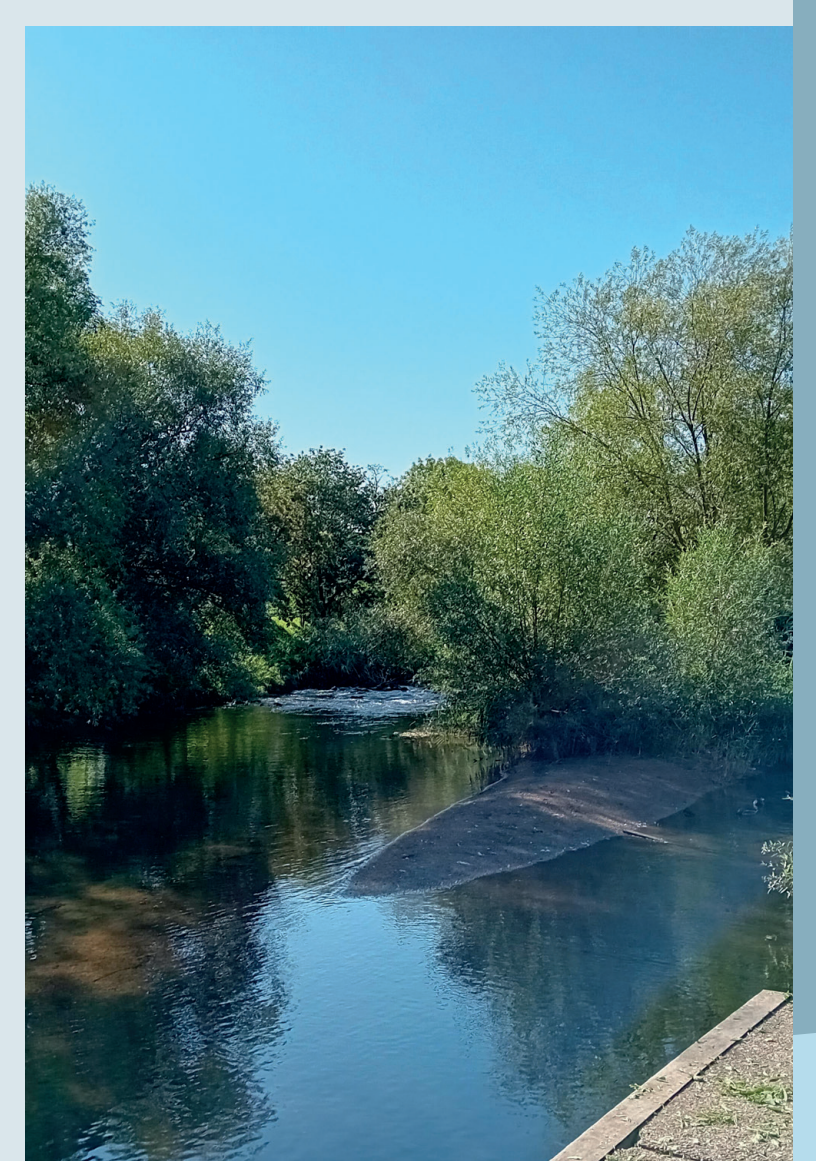


gradient of attachment
cost/benefit ratio
relation between human and environment

° PARTICIPATIVE WORKSHOPS (restricted corpus) with inhabitants and managers



how do inhabitants and managers see the evolution of the site, considering data of the 'one health' approach?



Seille River Park, Metz

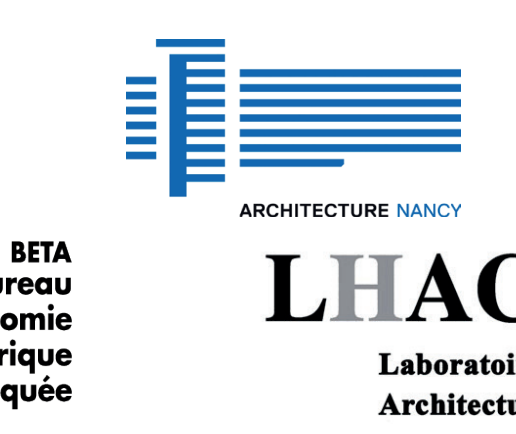


Madine Lake, Nonsard-L.

How can the results of this research could help to think well-balanced human/non-human relationships?



Mental'eau
project



Science Conference

23-27 june,
Tampere, Finland