



Miroirs, a videoludic survey on the relationship between well-being and aquatic ecosystem practices

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A videoludic survey on the relationship between well-being and aquatic ecosystem practices

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Eco-Health* Game context

Several games (e.g., EcoDive, The Fish Game, FloodSim) promote pro-environmental behaviors and illustrate the potential of video games as tools for **enhancing well-being** and/or **fostering environmental awareness**, particularly with regard to aquatic ecosystems. Although gaming behaviors can be monitored, researchers note the difficulty of obtaining telemetry data from entertainment companies and conducting additional surveys.

Result

Miroirs, a playful journey through aquatic places, their pastimes, and the human and non-human regulars they welcome

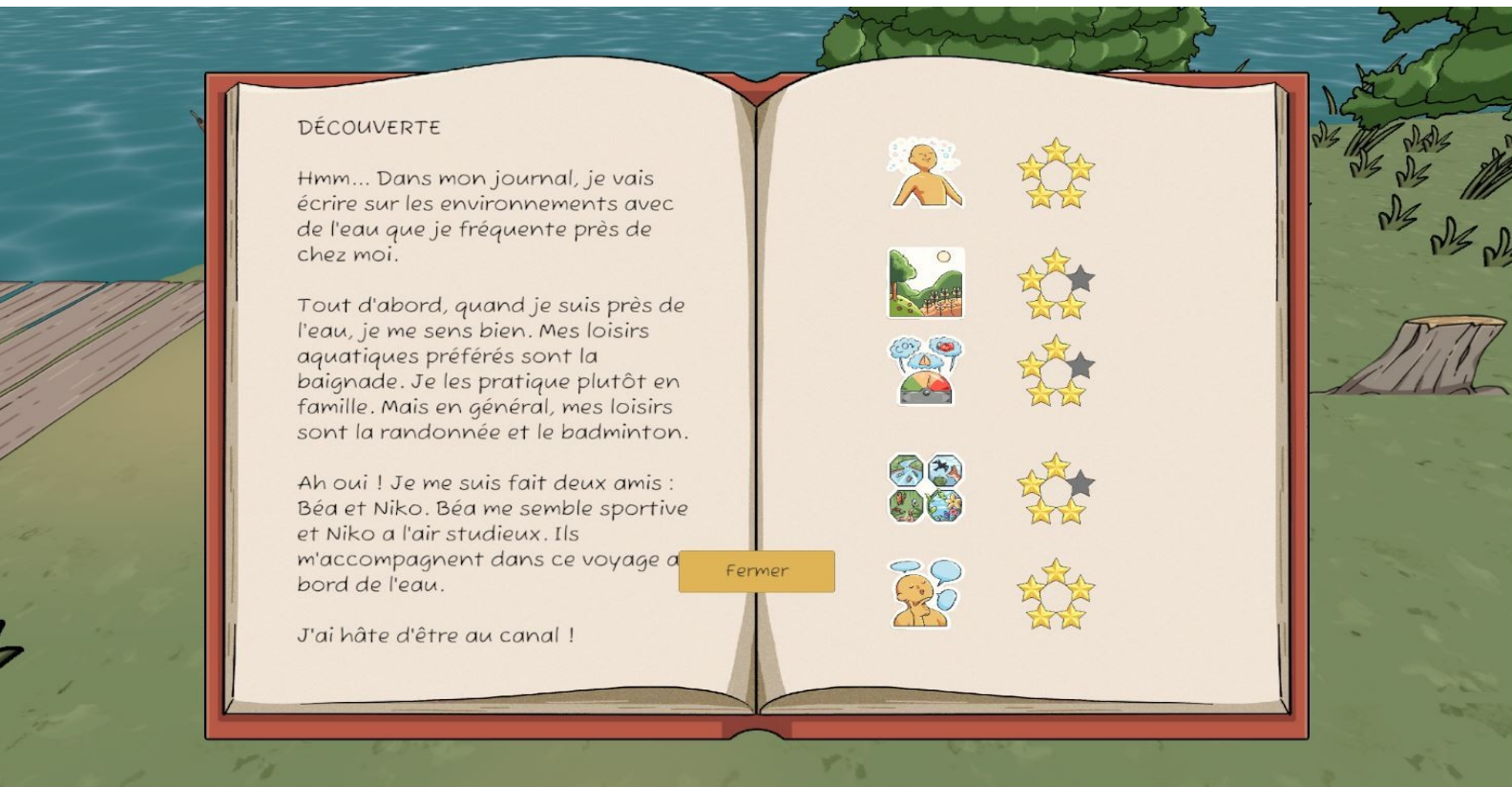
Scientific Pitch

Miroirs (Mirrors) is a research-driven game that embeds a survey into its gameplay, inviting players to explore aquatic sites both in game and in situ, complete quests, and **self-report their perceptions and emotions**.

Constraint: Immersive user experience

Goals

- + Create a playful video game
 - + Bridge Art & Science on Eco-health
 - + Connect with broader publics
 - + Provide insights for stakeholders
-
- + Survey Differently – innovative, in-game data collection



Gameplay

Miroirs is a quest-based adventure that invites players to explore and practice aquatic environments they know.

Genre : Role playing, Atmospheric, Nature, Casual, Cozy, Cute, Short (1h), Single player

Constraint: Includes a scientific survey

Survey with a notebook

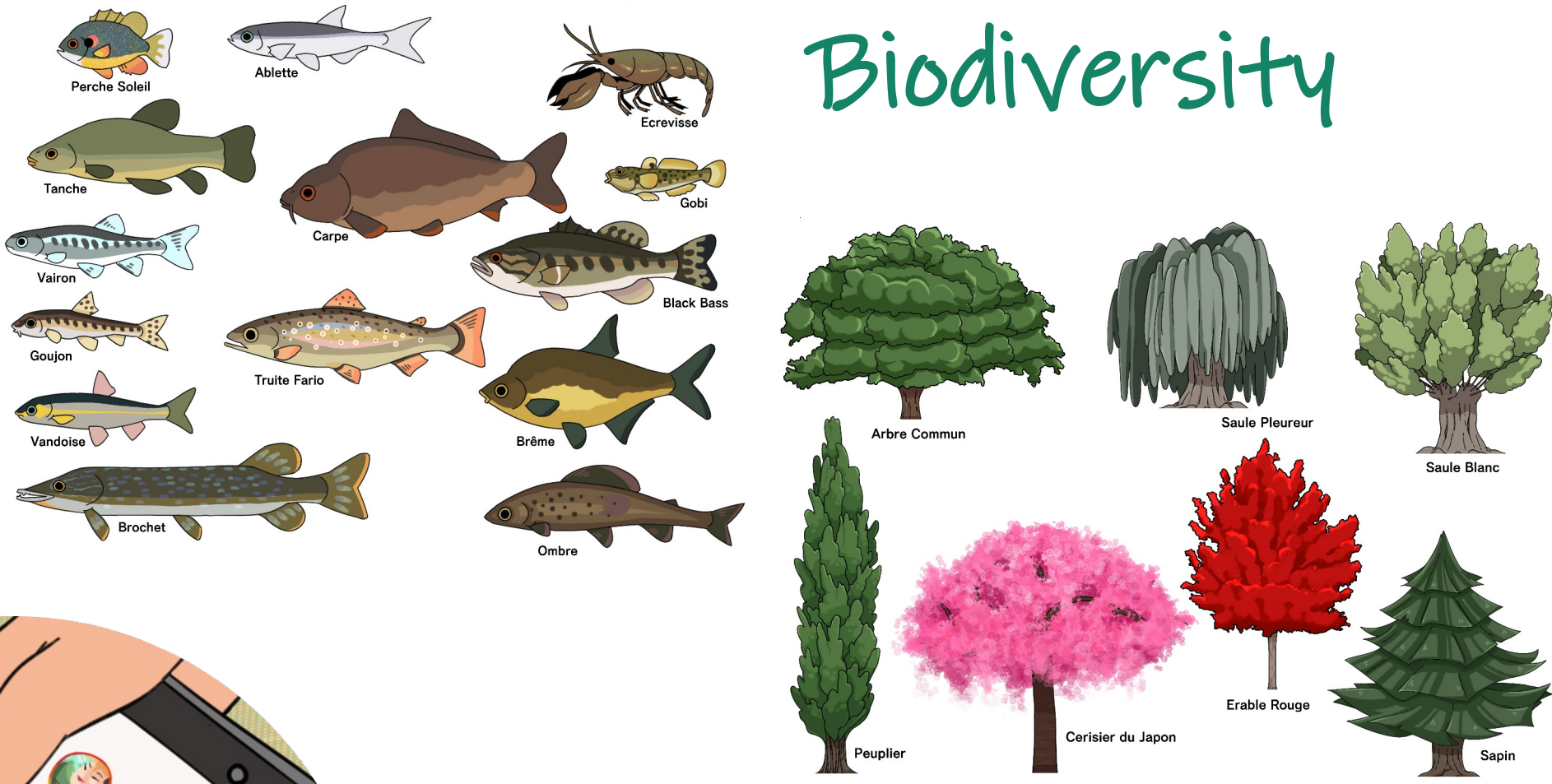
Hmm... in my journal, I'm going to write about environments with water that {I know/I visit} near my home. First, when I'm near water, {I feel good / I feel bad}. My favorite water-based hobbies are {free text}. I usually do them {with family/with friends/alone}.

To the best of our knowledge, Miroirs is a unique game in that it integrates a survey directly into the gameplay experience. Analyses will address the Mental'Eau project* objectives and evaluate the potential of game-based survey methods.

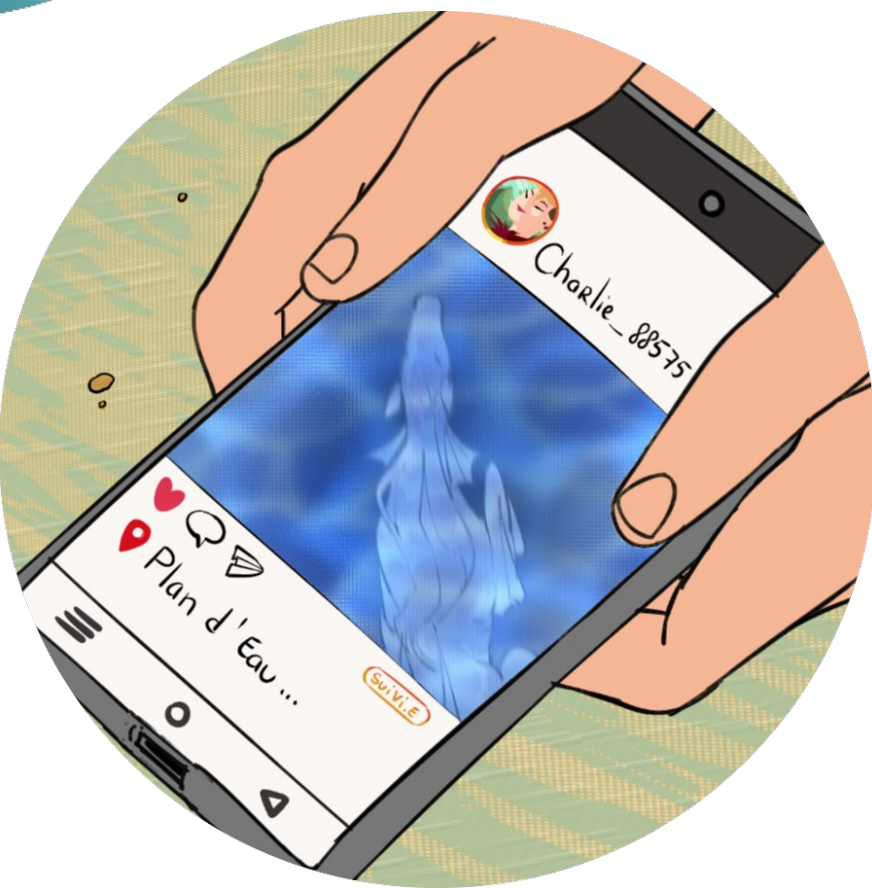
Aquatic places



Biodiversity



Practices



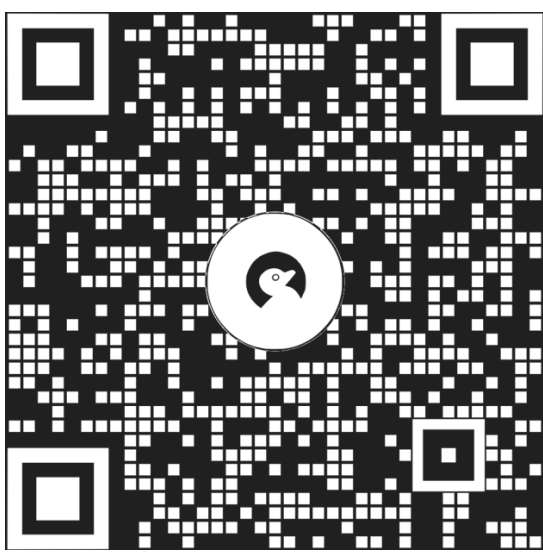
Game elements



Mobility

Implementation

On-line survey (Google form)



Game as a bonus (Unity)
Database (PHP)

player_commune	Loisirs aquatiques	Avec qui
roissy-en-brie	le canoé	en famille
Lyon		avec des ami.e.s
Saulxures-lès-Nancy	l'observation et la baignade	en famille
delme	rien	seul.e
Antananarivo	nager	avec des ami.e.s
euville	la randonnée	seul.e
Montpellier	laisser trapper mes pieds dans l'eau	avec des ami.e.s
Metz	les sorties naturalistes	avec des ami.e.s
Vittel	regarder les oiseaux	seul.e
Hoenheim	plongée et snorkeling	seul.e

Miroirs is funded by CNRS, the Agence de l'Eau Rhin-Meuse (Mental'Eau*), the Mecafu team of ICUBE, and the Réseau des Zones Ateliers. Further developments will be conducted within the « Wetlands Project », funded by Fondation CNRS.

*The Mental'Eau project (1) explores the links between individuals and aquatic ecosystems focussing on both use and health, understood as the mental and physical well-being people experience in relation to the ecological and landscape quality of these ecosystems. The project brings together an interdisciplinary team to assess ecosystem health and users' perceptions of well-being, in connection with their evaluation of ecosystem health.
(1) Doussset S, Fries Paiola C, Chauvin C, Paul A, Denechaud C, Nori L, Abildtrup J (2025). The Mental'eau project: what is the relationship between aquatic ecosystem health and human well-being? ARPHA Conference Abstracts 8: e155729. <https://doi.org/10.3897/aca.8.e155729>