DiadESland

Why are we playing instead of working?

Margaux Herschel, Patrick Lambert – INRAE Nouvelle-Aquitaine Bordeaux – 2022

LOCAL AND GLOBAL INITIATIVES:

HOW SCIENCE SUPPORTS MANAGEMENT ACTIONS ON DIADROMOUS FISH

What is a serious game?

Serious
adjective

1. *Severe in effect, bad;*
2. ***Not joking or intented to be funny;***
3. *Needing or deserving your complete attention*

Cambridge Academic Content Dictionary

Game
noun

1. *An entertaining activity or sport, especially one played by children, or the equipment needed for such an activity;*
2. ***Something that is not treated seriously***

Cambridge Academic Content Dictionary

Serious games

"We are concerned with serious games in the sense that **these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement.** This does not mean that serious games are not, or should not be, entertaining." (Abt, 1970 *in* Djaouti et al., 2011)

Why creating a serious game?

- Act as you would in real life
  - in an experimental, experiential, rule-based, immersive environment (Taylor 1971, Brewer 1974, Salen and Zimmerman 2004 *in* Zhou et al. 2016)
- Transfer the learning into the real world
  - assuming that learning is induced by taking decisions and experiencing their effects
  - feedback mechanisms built into and around the game induce learning (Lee 1994 *in* Zhou et al. 2016)
- Provide a sense of safety
  - low external risks
  - prerequisite for experimentation and creativity (Toth 1989 *in* Zhou et al. 2016)
- Explore possibilities of stakeholders interactions, collaboration and visioning. (Zhou et al. 2016)

The debriefing:
a discussion on reality

"Debriefing can be defined as: "the process in which people who have had an experience are led through a purposive discussion of that experience" (Ledermann, 1992)

Methodology

Based on literature review, identifying the phases of the debriefing, as topics that need to be discussed.

DEBRIEFING

Phase	Topic	
Cooling down	Experience, emotions	1. Change mental state from immersion to retrospection
Data collection	Measurement of objectives	2. Additional qualitative and quantitative data
Reliability Sensitivity	Decisions and choices	3. Identify crucial events and objectives possibilities
Ecological and social validity	Realism, omission and processes	4. Discuss realism, omission, game artificiality
Planning for action	Future research questions and actions	5. Determine follow-up research questions, concrete actions and how to coordinate them
Protect the instrument	Experience, emotions	6. Discuss innovation, controverse, and what can be fed back into the real world

Building DiadESland

- 8 months of work as scientific mediator
- 2 months of modelisation and balancing
- 6 « homemade » prototypes versions and multiple test sessions
- 2 months of work for the design
- 6 graphics version and more than 30 different illustrations
- 2 months for printing and delivery
- A lot of calls with DiadES partners for expertise and reviews

165 games

20 504 €

for graphic design and printing

+

9 510 €

for scientific mediation

=

30 014 € in total

Who build DiadESland ?

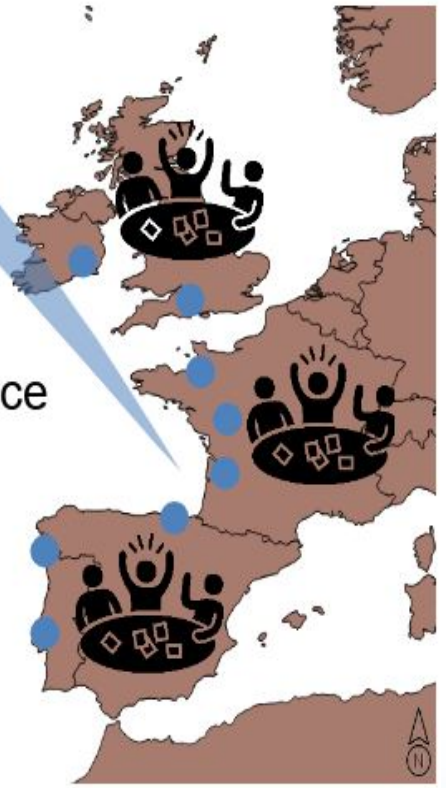
- Design of the game and balancing
  - Patrick Lambert, Grégory Lambert, Margaux Herschel
- Expertise and scientific feedback
  - Members of the DiadES project: individual meetings, literature on the project…
- Training of Game Masters and Game Observers
  - Across Europe with DiadES members : Carolina Alonso Rodriguez (AZTI), Estibaliz Diaz (AZTI), David José Nachón García (USC-EHEC), Emma Rendle (UoP-MI), Tara Gallagher & Ciara O'Leary (IFI), Silvia Pedro & Cristina Mateus (UE-MARE), Samuel Chaplais (UFBLB), Géraldine Lassalle, Violette Silve, Camille Poulet, Chloé Dambrine (INRAE)

Playing / Working with DiadESland

Meeting for writing management guidelines
in June 2022

Additional updates during the Final Conference
in July 2022

Publication in the *Parliament Magazine*
in Fall 2022



From real world to DiadESland

DiadESland is a learning experience for stakeholders to discuss management strategies of diadromous fish in the face of climate change.

Ecology

population dynamics,
straying/dispersal of fish,
ecology of reproduction

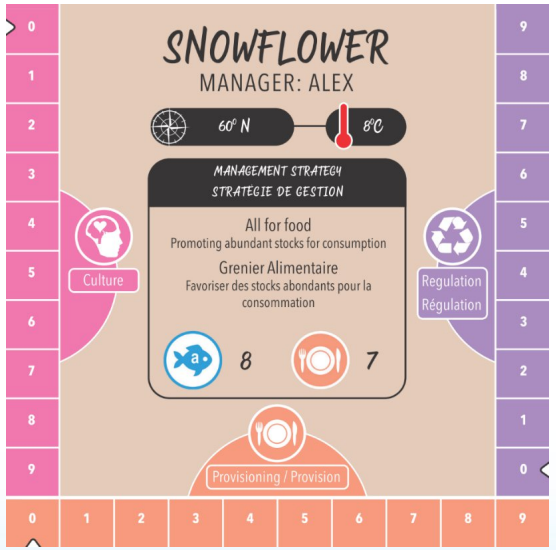
Economy

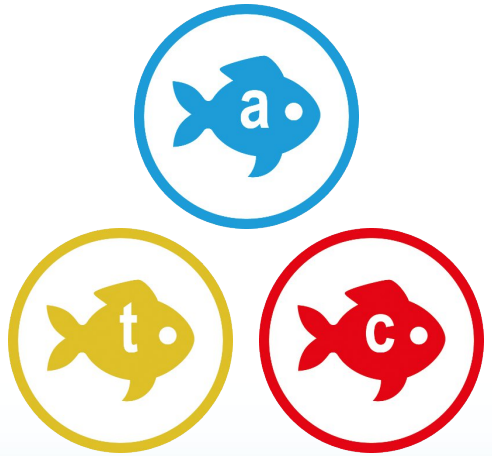
Ecosystem services associated with diadromous species: provisionning, culture, regulation

Welcome to DiadESland

DiadESland

- A fictional world with fictional catchments, managers and diadromous species designed for the game





Welcome to DiadESland

- A fictional world with fictional catchments, managers and diadromous species designed for the game
- 10 years per turn representing the long-term and large scale management issues due to global change

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- A fictional world with fictional catchments, managers and diadromous species designed for the game
- 10 years per turn representing the long-term and large scale management issues due to global changes
- Actions to choose to reach your management objectives: anticipation of the effects, calling upon the expertise of players
- Integrating tensions between local and collective management strategies

Welcome to DiadESland

Take up the challenge of diadromous species management

DiadESland, 2030.

Faced with climate change and multiple human pressures, diadromous fish are threatened.

To protect these symbolic species, five managers are tasked with writing the management policy principles for these species.

The task will not be easy: the effects of global warming are forcing fish and humans to adapt to these new environmental conditions.

How should the policies be designed to deal with new conditions? It's up to you!

Thank you for your attention!

Stop working, go playing now … seriously!

DiadESland game session IFI (Ireland) – 26.05.2022
Credit : Emma Rendle

Sources

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