



Role-playing game and learning for young people about sustainable development stakes:

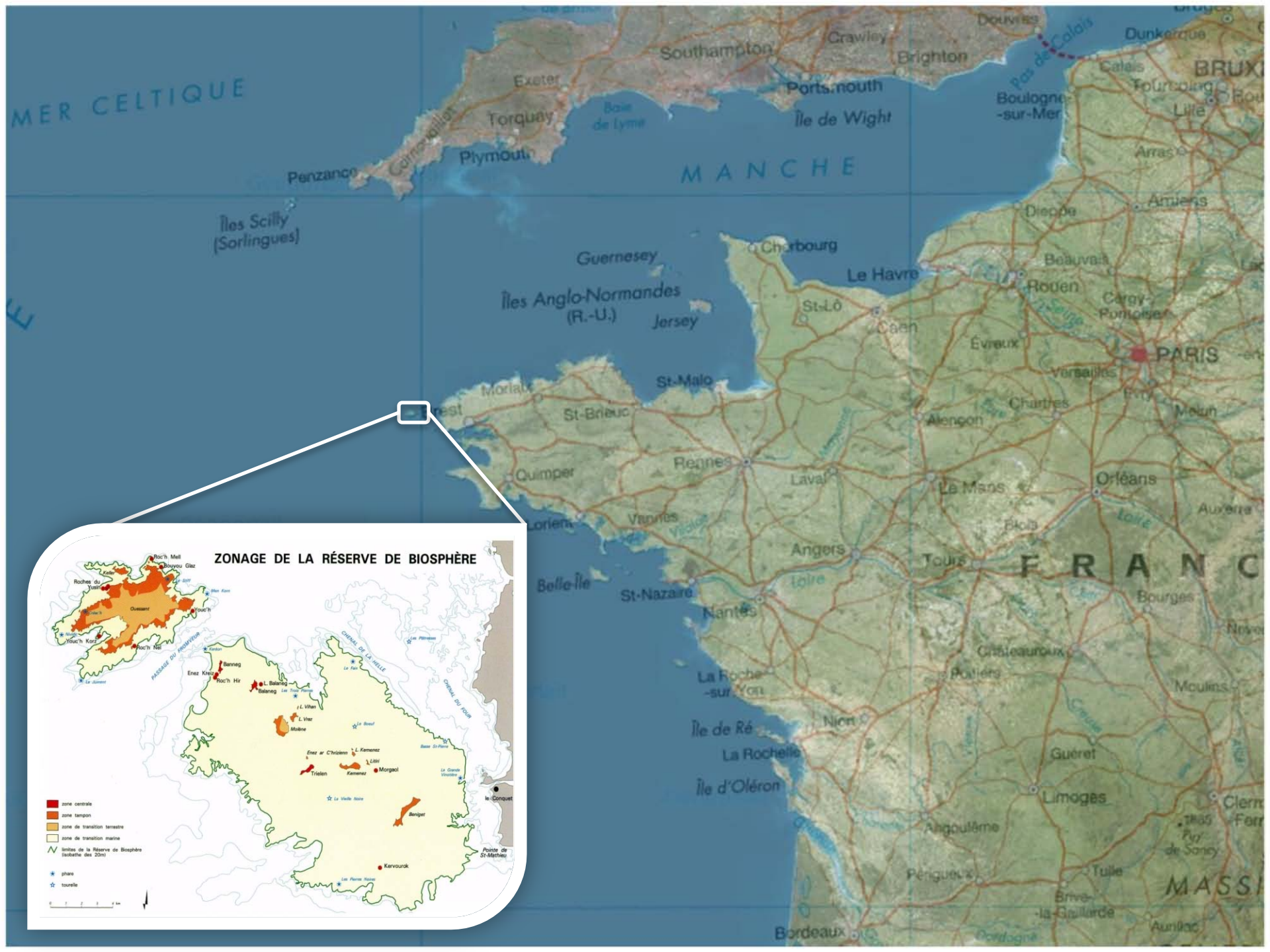
an experiment in transferring and adapting interdisciplinary scientific knowledge

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MAPS-2 "Teaching of/with Agent-Based Models in the Social Sciences"

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MER CELTIQUE

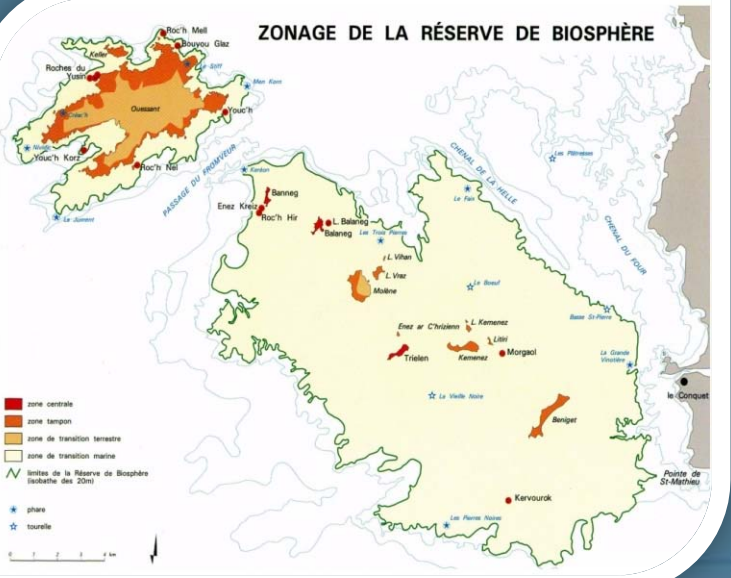
MANCHE

Îles Scilly (Surlingues)

Îles Anglo-Normandes (R.-U.)

FRANC

ZONAGE DE LA RÉSERVE DE BIOSPHERE



- Generalized and progressive abandonment of agriculture in the 1920's and the decline of traditional breeding

- Turf squares extraction from a domestic use to a commercial practice

- Increase of coastal footpaths and impact on biodiversity (*Pyrrhocorax pyrrhocorax*) due to the tourist visits of the island



An interdisciplinary project

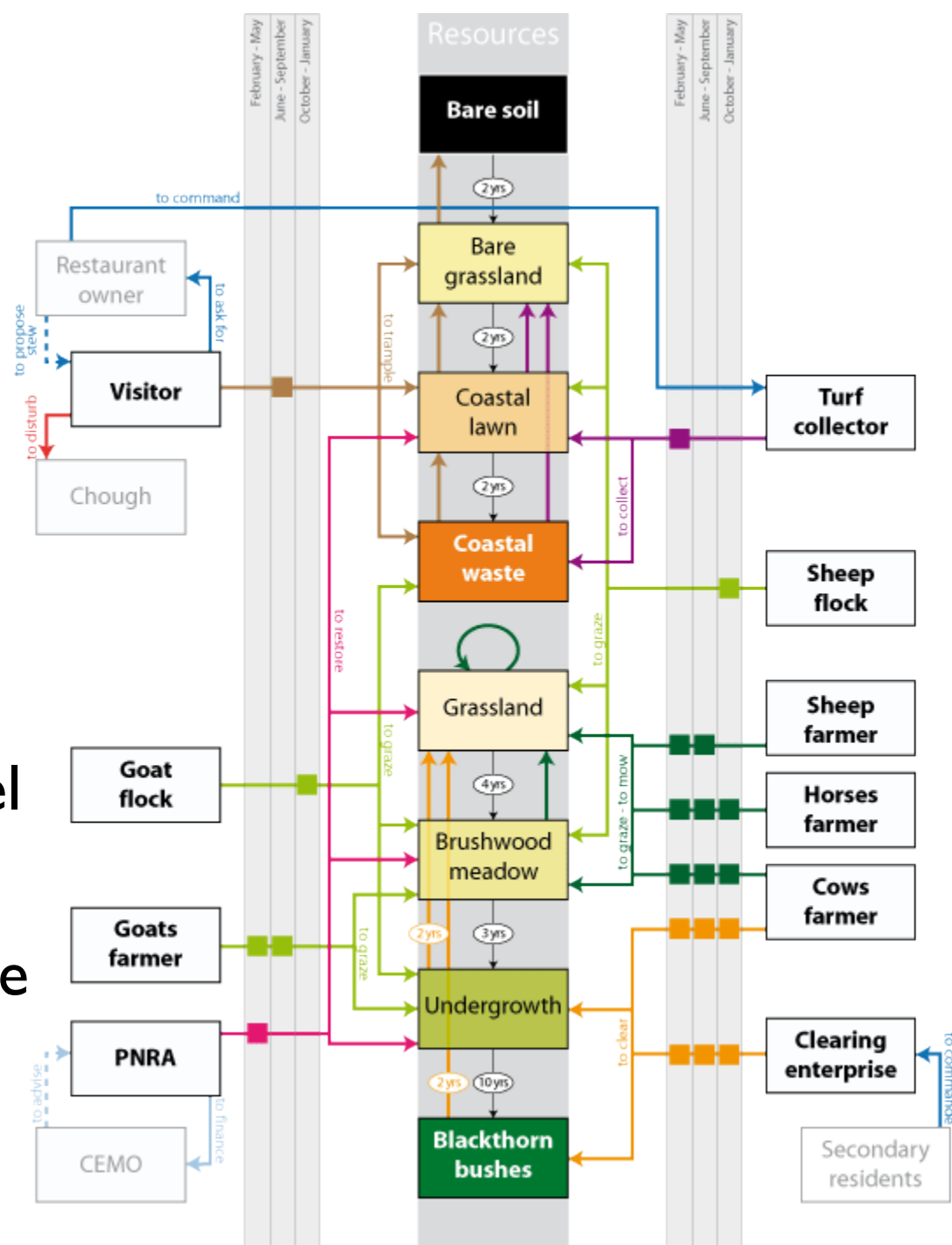
- 2003-2006 : IFB project « The organization concerning the access to the resources and biodiversity : application concerning the French biosphere reserves »



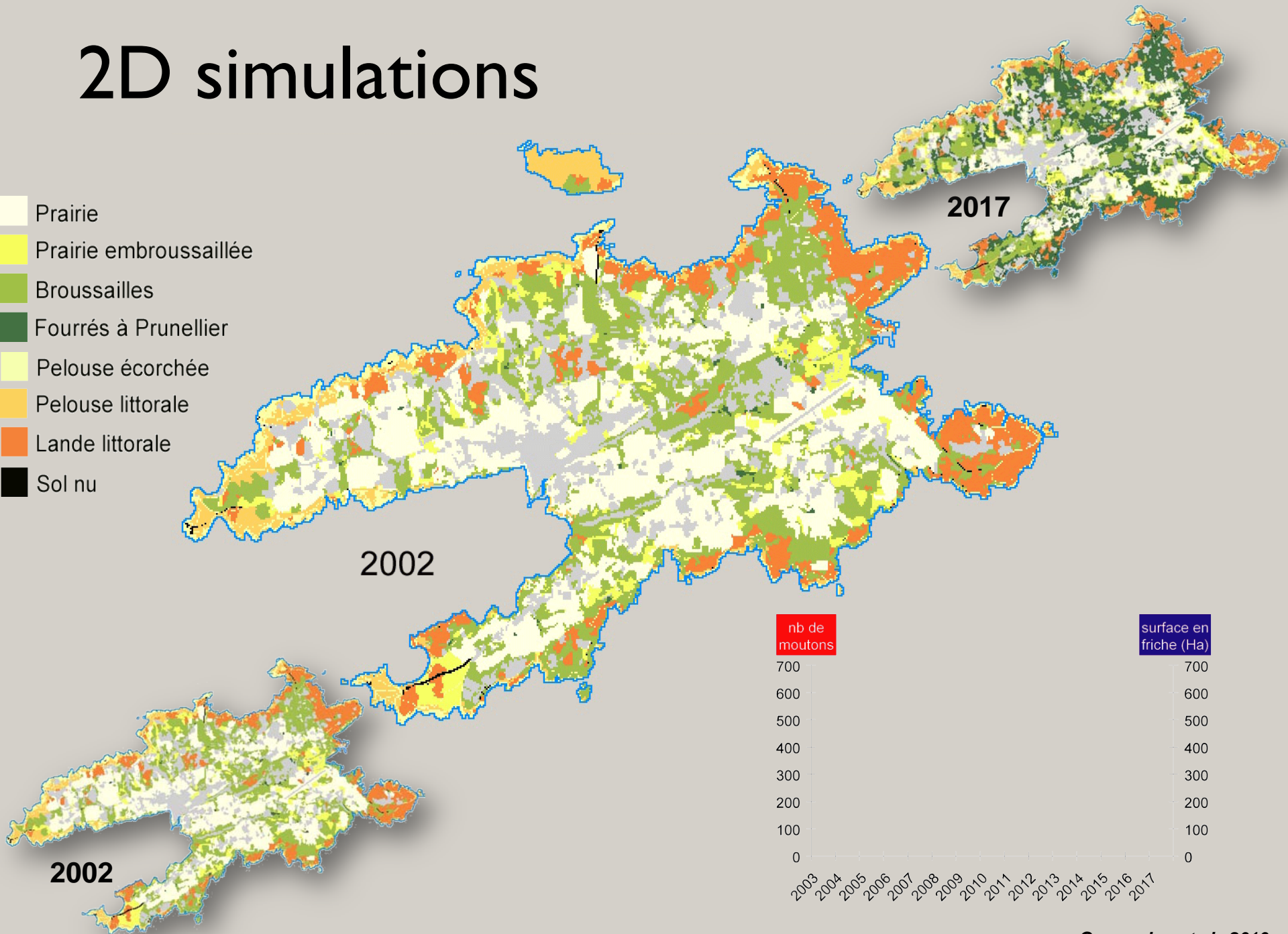
- Objectives :
 - Understand the interactions between the social evolution and natural dynamics
 - To offer a decisional helping tool
- Interdisciplinary approach with the manager

Models

- **Actors, Resources Dynamics and Interaction**
- **Conceptual model**
- **Cormas prototype**



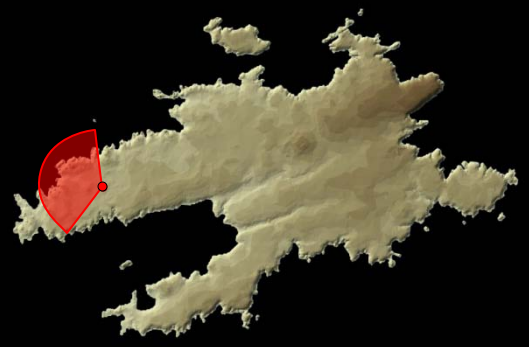
2D simulations



3D simulations

2002

2017



Role Playing Game

2006
For local
stakeholders

FONDATION
DE
FRANCE

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2008
Success with the
schoolchildren of
Ushant

ASOSC & IE projects

Région
BRETAGNE

2010
Adaptation to the
educational sphere

crs
dépasser les frontières

Adaptation to the educational sphere

- A new team : geographer, modeler, ethnologist

+ educators of **Océanopolis**



+ teachers of **National Education**



- Educational objectives :
 - **Initiate young people with the complexity of the environmental systems and their interactions with the social systems**
 - Involve students in environment management
 - Make children aware of the protection of their environment
 - **Adapt the content of animation to scholar curriculum**
 - **Develop an educational and interactive approach where children are actors**
 - Familiarize the kids with experimental processes
 - Develop student's sense of observation

First step : Tests and analysis

Familiarize with the
Role Playing Game

Precise analyze of
the scholar
programs thematic

Testing the Game
with students



An educational
workshop

An introductory
movie

Adaptation of the
rules, game board
and interface

2nd step : Adaptations

An educational workshop

- Targets: highschool (2nd)
- Duration: 1 day
- Place: Océanopolis
- Course of the day:
 - Role-play “Mottes- piquet”
 - Guided tour
 - Synthesis



2nd step : Adaptations

An introductory
movie

Avec le soutien financier de :



Dispositif ASOSC

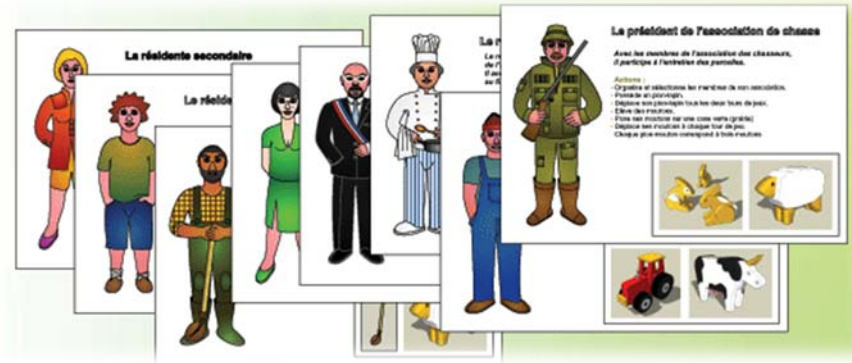


AO "Ingénierie écologique"

2nd step : Adaptations

Adaptation of
the rules,
game board
and interface

- One player removed and one another adapted
- New rules :
 - A new vegetation class : impassable undergrowth
 - A new biodiversity parameter : Chough population



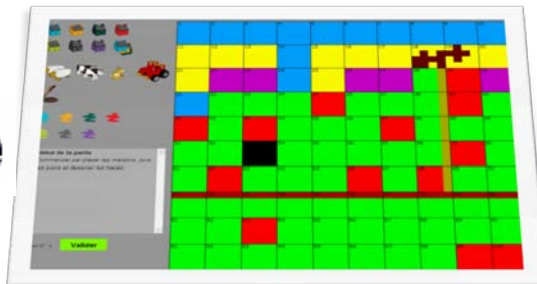
2nd step : Adaptations

Adaptation of
the rules,
game board
and interface

- New game board and pieces
- New user-friendly Interface based on Cormas platform



OXiane



Bluetooth®



- Wireless equipment

Conclusion & perspectives

- Presentation to teachers from academy of Rennes (EducTour)
- March/April 2010 : 13 sessions, 230 students from Paris, Nantes and Suede !
- Monitoring and analysis by the team for feedback in July 2010
 - Océanopolis : adaptation for other grade levels
 - Scientific : a critical look at the value of such a tool