

Board games for agriculture and landscape

Thinking, designing, facilitating,
evaluating, sharing

Sylvain Dernas, Yves Michelin,
Nolwenn Blache, editors



Board games for agriculture and landscape

Thinking, designing,
facilitating, evaluating,
disseminating

Sylvain Dernat, Yves Michelin,
Nolwenn Blache, editors

In the *Practical Guide* collection

*Identification of fishes by their otoliths in 3D
English Channel and North Sea*

K. Mahé, A. Mateos, É. Poisson Caillault, S. Couette,
R. Laffont, K. MacKenzie, N. Andrialovanirina
2025, 76 p.

Tropical Timber Atlas

J. Gérard (ed.), D. Guibal, S. Paradis, J.-C. Cerre (authors),
2017, 1 000 p.

Fishes of the Indian Ocean and Red Sea

M. Taquet, A. Diringuer,
2013, 704 p.

To cite this work: Dernas S., Michelin Y., Blache N., eds., 2026. *Board games for agriculture and landscape. Thinking, designing, facilitating, evaluating, disseminating.* Versailles, Éditions Quæ, 164 p. (*Practical Guide* coll.).

This book has received financial support from INRAE and the GIS Jeu et Sociétés.
It is distributed under a CC-by-NC-ND 4.0 licence.



© Éditions Quæ, 2026

ISBN paper: 978-2-7592-4281-8

ISBN PDF: 978-2-7592-4282-5

ISBN ePub: 978-2-7592-4283-2

ISSN 1952-2770

Éditions Quæ
RD 10
78026 Versailles Cedex
www.quae.com
www.quae-open.com

Table of contents

Acknowledgements 6

General introduction: games in society 7

Part 1. Understanding board games to improve their design

1. Key concepts before designing a game 13

What can we learn from the sciences of games (ludology) and play? 13

The five dimensions of playing a game 14

What is a serious game? 15

What is a board game? 16

The game as a means of revealing or transforming social space 19

2. The specificities of games on agriculture and landscape 23

Playing with agriculture: a great classic 23

The multiple complexities of agricultural activity 24

Playing with the landscape adds further complexities 27

3. Towards a typology of board games designed for agriculture and landscape 33

Level 1. Education or awareness-raising through board-based games 33

Level 2. Mutual recognition and building capacity for 'joint action' 37

Level 3. Cooperation and commitment for 'project-making' 39

Case study thread for Part 1 45

Part 2. Designing and building a game

4. Before getting started 53

What is the game about? 53

What are the game's objectives? 54

Who is the game's audience? 55

5. Simplifying reality through modelling	59
How to prepare the conceptual framework for the model	60
How to organise knowledge into a system	60
How to take spatial dynamics into account	62
How to take social phenomena into account	66
Where to include decision-making centres	68
How to calibrate the model	69
6. Creating the game world	71
Who are the players? Who are the agents?	71
How do the players interact: competition or collaboration?	72
How to represent spatial dimensions through the game board	74
How to integrate temporal dimensions into the game	76
What place should be given to chance and to the pleasure of playing?	78
7. Transcribing the model into a game	81
How to move from model to game materials	81
How to represent and manage flows of matter and information	81
How to define the rules of the game	83
How to spice up the game	84
8. Testing the game and making necessary improvements	87
Is the game's 'engine' working properly?	87
Are the rules clear?	87
Is the game fluid?	88
Are the game elements practical?	88
Is the playing time reasonable?	88
Does the game perform well?	89
9. Transforming a game that works into a game that people enjoy	91
Why good graphic design matters	91
The special case of 'sad games'	91

Are the graphics consistent with the message conveyed by the game?	92
Does the game correspond to its intended audience?	93
Case study thread for Part 2	95

Part 3. Facilitating, evaluating and disseminating a game

10. Facilitating a game session	99
Some theoretical points of reference	100
Preparing the game session	102
The roles of the facilitator	107
11. Evaluating the game	113
Some principles of validity for understanding reality	114
Defining your evaluation: understanding the real	116
Defining evaluation levels	120
Assessment tools	125
12. Devising a strategy for disseminating the game	131
Valorising your game: questions to consider in advance	131
Stage A. Baseline profiling of the game to guide valorisation and define an action plan	133
Stages B1 and B2. Who owns your serious game and how can it be protected?	140
Conclusion	151
Case study thread for Part 3	153
Conclusion	155
References	157
List of authors	161

Acknowledgements

The editors of this book would like to thank the following contributing co-authors: Valérie Angeon, H  l  ne Blasquet-Revol, Michel Bouchet, Yann Boulestreau, Paola Braduini, Anne Brunner, Camille Cl  ment, Sylvie Cournut, William’s Dar  , Romain Dureau, Nils Ferrand, Orlane Gadet, H  l  ne Gross, Sylvie Lardon, Sylvie Paradis, Christel Renaud-Genti  , M  dulline Terrier-Gesbert and Kuang-Yu Wang. This collective adventure began with a special session at the 2018 PECSRL conference, followed by a PEPS scientific priority seminar organised by INRAE’s ACT department in 2019. Completion took a long time, particularly due to the COVID-19 crisis, but the efforts and contributions of all the authors involved have resulted in a handbook that will benefit as many people as possible.

Thanks are also due to the reviewers—Fran  ois Guerrier, Gilles Martel, Guillaume Martin and   ric Sanchez—whose careful reading greatly improved the quality of the book.

We would also like to thank our institutions, INRAE and VetAgro Sup, for their support in bringing this book to fruition and the GIS Jeu et Soci  t  s for its funding.

Finally, the editors would like to thank   ditions Qu  , particularly Christelle Fontaine and Juliette Blanchet, for their attentive monitoring and sound advice throughout the editorial process.

General introduction: games in society

Sylvain Dernas, Yves Michelin, Nolwenn Blache

In her famous 1990 book *Governing the Commons*, Elinor Ostrom drew the following conclusion: “Since Garrett Hardin’s stimulating article in *Science* (1968), the expression ‘the tragedy of the commons’ has come to symbolise the environmental degradation to be expected when large numbers of people share a scarce resource”. However, based on her observations of cooperation arrangements in the field in Latin America, Asia and Africa, she shows that common goods and their collective management represent real opportunities for tackling the threats posed by climate change and environmental degradation. They offer genuine alternatives to state systems and individual property, promoting forms of emancipation and empowerment of individuals and groups in the face of central power or economic and political deregulation. While there are many initiatives aimed at promoting this emancipation, they come up against a multitude of personal interests and stakeholder priorities that diverge and often clash.

For example, the vast majority of citizens are in favour of preserving high-quality water resources. However, the priorities of a farmer who irrigates his crops and needs a regular quantity of water, a fisherman who is concerned about minimum low-water flow and oxygen content, and a resident who would like to drink tap water differ because they belong to socio-professional categories with different needs and expectations. These priorities also depend on the geographical, political or economic context, which defines behavioural rules and imposes non-shared standards. This state of affairs leads to deadlocks, with the common good being the big loser.

This, however, is not inevitable. Ostrom has documented the ways in which different communities have been able to create institutions that successfully manage the commons. She highlights several success factors: the management of the resource system to anticipate its renewal and guard against the risk of depletion; the creation of rules for collective choice and arbitration within the system of governance; and the integration of norms and knowledge brought into play by users. Collective action, defined as a group strategy aimed at achieving a common goal, thus appears to be a dynamic social process made possible by communication, proximity, trust and competence. Understanding these social parameters and their impact on the functioning of the environmental system in terms of how it is used and managed is essential if we are to identify effective adaptation strategies for preserving common assets and ensuring that they are managed equitably.

Individuals who wish to act collectively must therefore be able to comprehend together the complexity of the phenomena they have to deal with and be able to co-ordinate, taking into account the motivations and determinants of the other stakeholders. But this is neither obvious nor usual. The management of common goods requires the use of specific tools capable of representing the complex

dynamics of ecological and socio-technical agricultural systems in which individuals with divergent interests and heterogeneous capacities operate. These tools must also facilitate debate on shared issues and the construction of effective management methods that are acceptable to all parties. Faced with this difficult challenge, social actors, development agents and simple groups of citizens have been tinkering with tools and experimenting with solutions for decades.

Among these many initiatives, gaming has long been identified as highly relevant for at least four reasons:

- The simplifications it makes, while retaining a similarity with reality, make it easier to grasp reality, offering the possibility of understanding its complexity and making its functioning more comprehensible.
- By promoting the total commitment of players during the game, it helps each participant to step into the shoes of others and discover points of view, ways of doing things, and ways of relating that they would not necessarily have access to in ‘real life’.
- By enabling players to experiment with different outcomes by acting on certain parameters over the course of successive games, they can assess the consequences in a risk-free environment.
- By virtue of its playfulness, the game can arouse players’ interest in an abstract skill that can then be applied to a concrete problem. By attempting to solve the problem in a game sequence, each participant assimilates a large amount of knowledge, which is more durably implanted than in conventional learning processes involving formal knowledge and iterative trial-and-error learning.

Games can therefore be integrated into participatory approaches to make social values more tangible, understand the responses of stakeholders to various scenarios, and show the implications of decisions and proposed changes on the state of a common good, a natural environment or a region. Games have been used to transmit knowledge or reveal mechanisms but, also and above all, to facilitate communication between social groups that did not know or understand each other, and to support various types of stakeholders in providing new solutions for sustainability. This ‘socioconstructivist’ approach to the game is essential: it is interaction that precedes learning. Individuals need each other to evolve and to make their environment evolve. Games are therefore not seen as a means of persuasion or manipulation; rather, they facilitate shifts in ways of thinking that are sometimes deeply entrenched. This enables collective action rather than simply transferring knowledge.

This book adopts this perspective by focusing on the specific themes of agriculture and landscape, which raise many questions about the common good and working together. Agriculture is currently facing a number of upheavals such as climate change, the erosion of biodiversity, the arrival of digital technologies, and the decline in the number of farmers. These upheavals are necessitating far-reaching changes and creating a strong need for adaptation. These changes cannot be addressed solely at an individual level (one farmer, one farm) but rather must be seen as collective actions within regions and sectors that take into account their specific social, economic and environmental characteristics. They impact land use, the composition of flora and fauna, the layout of plots of land, the density of networks of hedges, low walls or embankments and the shape of watercourses, large or small. In other words, these changes influence all aspects that are directly linked to the landscape.

Across the world, many professionals (farmers, technical advisers, experts), citizens and researchers are designing and using board games to facilitate

consultation, change practices or representations or simply to pass on knowledge. Games have been used for this purpose for several decades. Although some initiatives are supported by game design specialists, and there are flagship titles for the general public, such as *Farming Simulator* or *Agricola*, most games are created by novices. This breathes new life into the field of games by giving people plenty of room to create. However, these initiatives often fail due to a lack of audience, time or structure, or simply because the games are poorly designed or misused. Many games remain in drawers and do not benefit the greatest number of people, even though these tools could really help to ‘create a sense of community’. The main aim of this book is to provide newcomers with the tools to progress step by step through their project, from building and running a game to evaluating and disseminating it, until they produce a useful result for the community.

This book has been written by researchers and teachers with almost 20 years’ experience of developing, using and teaching games on agricultural and landscape issues. They have collaborated with specialists recognised nationally and internationally for their expertise in games and these themes. Like a practical guide, this book looks at the main pitfalls and offers the most operational solutions possible. However, readers should be warned that this book is not a ‘turnkey’ solution. The authors want readers to take charge of creating, facilitating, evaluating and disseminating their own games. This book is a support tool in the strict sense of the term, providing support for the reader’s projects without laying out a ready-made path.

This process is subdivided into three main parts:

- The first part provides knowledge resources to help readers better understand serious board games dealing with agricultural and landscape issues. It also provides a framework for understanding the social dimension of the game, as perceived by the authors, and as will be explored throughout the chapters. Finally, it offers a typological approach to situating the game within a range of practices.
- The second part focuses on the actual design of the game. It takes you from idea to prototype in a few simple, precise stages. In particular, it looks at the specific issues involved in transposing agricultural or landscape models into games.
- The final part deals with post-design. It explains how to run a game session from preparation to delivery, and how to evaluate it to measure its impact during and after the session to ensure that the games are used effectively. Finally, it looks at how to maximise the potential of the game by raising questions about dissemination, intellectual property and communication.

Throughout the text, examples are used to illustrate the message. These examples deal with games developed by the various authors. Detailed descriptions of these games are freely available in the games library on the GAMAE platform.¹

Furthermore, the book is illustrated throughout the chapters by an example of the design of a serious game that serves as a case study thread or ‘throughline’. The one we chose focuses on the return of the wolf to the Massif Central in central France. This predator, now a protected species, had been absent from the area since the mid-20th century. Its return is causing a great deal of controversy in this pastoral region as it calls into question the agro-pastoral systems that have evolved since its disappearance. The discourse surrounding this

1. <https://ludotheque.gamae.fr/>

charismatic animal is charged with emotion, with conflicts between actors exacerbated by the reality in the field and the fantasies (both positive and negative) surrounding the wolf. A serious game based on this complex issue was therefore created in 2020 by a group of final-year engineering students at VetAgro Sup in Clermont-Ferrand. This is where the editors of this book teach and study. This game was chosen to illustrate the book as it is a typical example of a serious game designed using a trial-and-error approach by a group of 'naive' students. It is thus possible to trace its creation from start to finish: from when the instructions were given to when the game was tested under real conditions. This is exactly what the readers of this book expect. This throughline example therefore provides a reflective analysis of an experience that predates the creation of the manual. It highlights the aspects of which the students were unaware, which sometimes led them to make design errors or encounter technical impasses. This retrospective analysis has enabled us to enrich the content of the various sections based on what we believe readers would like to find there.

These introductory lines give the reader a sense of what this book is about. It is not just another guide to game design focusing on agriculture and landscape. It also offers a fresh perspective on games, exploring how they can be mobilised to facilitate the transitions that we urgently need to address. Ultimately, the authors aim to make the reader active and breathe life into the book. Indeed, it is possible that this book will propose inadequate or incomplete solutions to certain situations or that readers will come up with new and innovative ideas. Readers are invited to submit their ideas to the editors so that the guide can be enriched with new content in future editions.²

2. These proposals can be sent to Sylvain Dernat at sylvain.dernat@inrae.fr.

Part 1

Understanding board games to improve their design

Playing is often perceived as a childish activity that is obvious and requires no effort. From there, it's an easy mistake to think that designing a game is child's play, but that's a line we'll be careful not to cross. Designing a game, especially one that serves a purpose—in other words, a serious game that is also enjoyable to play—is not something one can improvise. There are plenty of games that are either too serious to be enjoyable or too simplistic to be useful. Fortunately, games have been the subject of abundant literature and academic study for over a century. In this section, we propose to review the origins of the study of games, as well as the main theoretical approaches and meanings. This will provide anyone tempted to design or use a serious game with a basic understanding of the subject.

The first chapter aims to better characterise what a game is and specifies the characteristics of a serious game. It also proposes a broader definition of the board game, emphasising what makes it so rich. Playing is not a trivial act. We therefore thought it would be useful to devote a specific paragraph to examining the act of playing a game from a deontological point of view and then to consider its impact in the social arena. This perspective lies at the heart of this book. It is therefore important to describe it in order to understand the meaning that the authors give to the creation and mobilisation of play.

Chapter 2 looks at the specific nature of games that deal with agriculture and landscapes, exploring the origins of this playful practice and addressing the many complexities that arise from agricultural and landscape issues in games.

Finally, Chapter 3 proposes a typological approach to the use of games based on the above-mentioned approach. This typology aims to help readers position their game design or mobilisation project within a multitude of possible practices and characterise the issues and opportunities involved.

1. Key concepts before designing a game

Sylvain Dernas, Yves Michelin, Nils Ferrand, Nolwenn Blache, Sylvie Paradis, Sylvie Lardon

While it is easy to recognise a game when we see one, it is much harder to give a simple explanation of what a game actually is (Wittgenstein, 1953). In French, the verb '*jouer*' (to play) and the common noun '*jeu*' (game) use the same root, like in German (*spielen* and *Spiel*), Spanish (*jugar* and *juego*) and Italian (*gioca* and *gioco*) to designate two quite different aspects that English distinguishes as game and play. Game refers to the framework within which the ludic activity takes place, i.e. a system of rules. Play refers more to the play activity itself, the experience and what constitutes that experience.

This distinction reflects the existence of two opposing poles that fundamentally structure games (Caillois, 1958). On the one hand, Caillois refers to the disciplined game, regulated by conventions and similar to the English term game, as *ludus*. Chess is a very good example of this type of game. On the other hand, he refers to *paidia* as spontaneous and turbulent play devoid of rules, reminiscent of play. Caillois refers to the spontaneous games played by children who spin on a swing faster and faster until they get dizzy. All games fall somewhere on a gradient between these two poles. A highly codified game does not exclude the pleasure of playing, and vice versa. This is why the term 'gameplay', widely used today, was coined in the English language to encapsulate this duality in the design of games.

This tension between *ludus* and *paidia* (or between game and play) is common to all games and serves as a reminder that games have two dimensions: objective and subjective. These dimensions are explored by various theories and provide an essential foundation for any game designer.

What can we learn from the sciences of games (ludology) and play?

Derived from information theory and inspired by structuralism, the mostly Anglo-Saxon game sciences view the game as a set of rules, a series of instructions designed to set limits and specify the procedures to be followed. The rules define a perimeter, a spatial and temporal limit within which particular principles apply. These rules depart from the usual principles that apply in the real world. The game is therefore an artifice for simplifying reality to make it more comprehensible. However, the game is not defined solely by its rules. It is also a way of organising them. The rules must be arranged in such a way that they can interact with each other to form an organised whole. As these rules can be implemented with different players without being changed, ludology defines the game without referring to what a player is. In fact, players are not at the heart

of its concerns, as they are only there to use the rules. In this type of approach, we are more interested in the operations that players can perform than in their thoughts or feelings as individuals.

Conversely, studies of play provide a psychological, sociological or even cultural perspective on the practice of play. In his famous book *Homo ludens*, Johan Huizinga (1988) shows that play is an integral part of human culture. It is impossible not to play. We think of play as an experience or an attitude. According to these theories, which are influenced by the French school of thought, play is distinguished first and foremost by its meaning and the player's inner experience. The player therefore occupies a central position. The aim of this research is to understand how players use the game to create experiences in which they know they are in a hypothetical world with its own reality. This second degree is a defining feature of games. Describing how this process operates in the player(s) allows us to describe the game. In this case, the media used to play the game merely serve to support its use: the rules, equipment and practices are not playful in themselves. These studies therefore attach less importance to the media used to play a game and focus instead on the reasons why people play. The game is defined more by the attitude of players towards it than by its complex technical medium.

The five dimensions of playing a game

To avoid falling into the pitfalls of analysis, Brougère (1995; 2005) suggested that playing a game should not be defined in a single, compartmentalised way, but should be approached through five dimensions:

- The game operates on a second level of meaning. To play is to pretend. Any activity could become a game, provided that this framework of second-level engagement is maintained. Conversely, a game taken at face value would cease to be one.
- The game involves a series of decisions. For the players, playing the game means making decisions, and the decisions they take directly influence the course of the game.
- The game is organised around decision-making mechanisms. To make these decisions, players must adhere to a coherent set of rules that form a system. This concept differs from that of a single rule, as players can comply with the decision-making mechanism while circumventing the rule itself. This is what makes the game flexible and adaptable.
- The game is always in a state of tension between predetermination and uncertainty. We never know exactly how a game will unfold or end. While it is regulated and therefore not totally uncertain, it is not totally certain either, as it leaves room for the players' own investment and behaviour.
- Games are frivolous because they minimise the consequences of the decisions made during the game. In a game, you carry out actions in a risk-free environment because the game resembles the real world without being real. It allows you to confront failure without suffering the consequences.

So, is the notion of a serious game an oxymoron? After all, the frivolity and second-degree nature of games are quite contradictory to the serious nature claimed by this type of game. This paradox leads us to define what a serious game is.

What is a serious game?

The term ‘serious game’ refers to any game whose main purpose is not entertainment. In this case, the game has a purpose other than ‘pure entertainment’, a concept that was formalised and made explicit when this type of game was first conceived. However, this distinction appears to be unfounded, as many games are used for learning purposes, particularly with children. They are therefore useful in their own right. Moreover, according to Abt (1970), the originator of the term ‘serious game’, even if the main purpose of this type of game is not entertainment, it can nevertheless be entertaining. It is the serious intention of the game designer or the game session that makes the game ‘serious’. Serious games are therefore a particular type of game in which frivolity is not a primary design consideration, although it may be. It is nonetheless a game that meets all the other characteristics.

Moreover, the term ‘serious’ is now used almost exclusively in reference to digital games. A serious game necessarily makes use of digital technologies for playful learning purposes. While this is due to the massive use of digital technology in the creation of computer games for training and education purposes over the last 20 years, we feel this definition is too simplistic. In practice, the term ‘serious game’ should be used very broadly, to encompass applications that do not use computer technology. These are known as ‘analogue games’. This is what this book is all about.

However, even after defining what a serious game is, another term commonly used remains undefined: ‘gamification’. This term is occasionally confused with that of games, particularly serious games. It refers to the use of game mechanics or principles in activities other than playing games. For example, its aim is to increase the acceptability and use of tools, methods and products by appealing to people’s taste for and sensitivity to games. The idea is to add the motivating mechanisms of play to a pre-existing activity to achieve a goal beyond playing. Although gamification uses game mechanics to increase the extrinsic motivation of players, whether customers or students, it is not a game because its purpose is not to play, but to achieve a specific goal in a real-world situation. As described above, these game mechanics are mobilised without being considered as a coherent whole. These mechanisms involve immersion in an attractive fictional world, the use of rewards when objectives are reached, the definition of success after the completion of defined tasks, the existence of challenges to be solved, and the creation of competitive or cooperative situations. Serious games are therefore more than just games because they go beyond the mere use of game mechanics. They are not based solely on a motivational dynamic linked to a specific moment or action. They have a longer-term objective of bringing about lasting change in a situation.

We therefore believe that in order to encourage a form of learning through play, it is necessary to mobilise the various criteria presented above from the outset of the game design. There are two complementary aspects to bear in mind. On the one hand, we need to consider the balance between the rigour of the rules and decision-making mechanisms, and the role of the player’s experience within the game. On the other hand, we need to ensure that the game is useful in the real world while maintaining its internal coherence as a ludic experience in its own right. We therefore use the term ‘ludicisation’ to describe the process of creating a serious game.

What is a board game?

As our book focuses on board games, we need to define them more precisely. The term has many different meanings depending on the language used.

The game board as an object or support

In English, the word ‘board’ evokes a piece of wood, a thin, flat board used for playing games, such as a chess board. The word also has a second meaning: a board or display on which you can write or draw things you want to remember or communicate. We therefore propose considering the game board as both a communication tool between players and a surface that enables several people to play and exchange ideas.

Syeleterr

This game explores how dairy farms interact with their environment. It helps players understand the technical, economic, social and environmental dimensions of a global approach to farming. The aim is to acquire the vocabulary and basic knowledge of how a livestock farm operates and to consider the impact of the production system on its environment. It was designed between 2010 and 2020 in partnership with the *Institut de l'élevage* (French livestock institute).

Authors: Yves Michelin, Sylvie Cournut, Cécile Achour, Doriana Tremeaux.

Example

In *Syeleterr*, the board is a simplified representation of a small rural area with all its characteristic features, such as topography, farm buildings and dwellings, water-courses and land plots.



Figure 1.1. The *Syeleterr* board.

Depending on the game and the stages involved, the board may be variable in size and shape, manipulable or not, and single or multiple (composite). It can take the form of a schematic or simplified (2D) map of an area, or a 3D model. It can be a faithful representation of a landscape or farm, or a simplified model inspired by reality to a greater or lesser extent.

Whatever its form or format, it may also serve as a partial representation to be completed collaboratively during play. In such cases, for example, a map or model produced becomes a result in itself, the very purpose of the game being to compose it.

Les Tréteaux du Paysage

The support scheme for *Les Tréteaux du Paysage* (*Landscape trestles*) was set up between 2008 and 2009 to implement the landscape charter of the *Parc naturel régional des Causses du Quercy* (PNRCQ), approximately 10 years after its creation. The idea is to go out into the field and engage with the people concerned by setting up trestles and a work board in the landscape to facilitate collective observation and debate, and to encourage projection into a fictitious and simulated landscape. The game also proposes a variety of iconography, which is used as a means of expression and for individual or collaborative output (e.g. landscape block diagrams with tracing paper for drawing, a ‘model’ to be built using a standard village plan and Lego®, photographs of agricultural landscapes, etc.).

Authors: Laurent Lelli and Philippe Sahuc.

Example

In *Les Tréteaux du Paysage*, Lego blocks® allow players to discuss and illustrate urbanisation scenarios to accommodate climate migrants in a small fictional rural village following an imaginary, scripted disaster.

The game board as a social space

In French, a *plateau* (board) can also be the stage of a theatre, show or even film set. It is a stage that can be more or less formal, with a more or less detailed set. In a sense, role-playing games offer something similar, where participants play an assigned role in a simulated situation in which they must debate decisions, with staging that can include disruptive events and unforeseen circumstances (such as hazards, brakes or levers).

Many of these serious games also feature real farms, such as the game *L'exploitation dont vous êtes presque l'agriculteur* (*The farm where you're almost the farmer*), which was developed based on a PhD thesis that aimed to identify the resilience factors of dairy farms (Perrin, 2021). In this game, descriptive sheets present techno-economic data that bring the case examples to life.

This contextualisation, in which a story is played out to support the game, can also be likened to ‘forum theatre’, a creative workshop that offers support through exchange and interaction to raise awareness of different views, discourses, stances, etc. This approach is inspired by one of the tools of the Theatre of the Oppressed, invented in Brazil in the 1960s (Boal, 1974).

However, these ‘life-size’ games fall outside the temporal, spatial and social framework of board games. Therefore, we consider games that use a portion of space or landscape as a stage to be outside the scope of this book because the associated game design is very different.

The game board as a group of actors

In English, the word ‘board’ can also refer to a team, a group of people making decisions together. This idea underlies a number of board games, which several authors in this volume draw on in their work on agriculture.

Vitigame

The game was designed following the work of the Eco3Vic project (funded by Ademe), in which a methodology and tools were developed for participatory eco-design workshops with winegrowers, based on environmental assessment results using life cycle analysis (LCA).

Authors: Anthony Rouault, Christel Renaud-Gentié, Séverine Julien, Aurélie Perrin, Frédérique Jourjon.

Dynamix

This co-design tool was developed with a group of farmers, extension officers from the Ariège Chamber of Agriculture and researchers from INRAE as part of the GO PEI ‘Rotations 4/1000’ project. It helps cereal growers and livestock farmers to re-design their systems and to encourage the relocation of inputs by diversifying rotations and including grassland for cereal growers and local food for livestock farmers.

Authors: Julie Ryschawy and Aude Pelletier, with the support of Anaïs Charmeau, Txomin Elozegi, Myriam Grillot, Guillaume Martin and Marc Moraine.

PayZZage

This board game invites participants to think collectively about the relationship between livestock, landscape and biodiversity. Created in 2016, the game provides a fun and active way to learn about agro-ecology and functional biodiversity. It helps players to put into practice skills such as reasoning about plot allocation based on production objectives and constraints, decision-making and soft skills such as communication, negotiation and cooperation.

Authors: Gilles Martel, Audrey Alignier, Estelle Meslin.

Example

In the *Vitigame* game, players have to work together to design a more environmentally friendly winegrowing technique. Other games focus on collective decision-making within a single farm to promote greater sustainability (e.g. agro-ecological practices) and resilience or cooperation between different farms in the same area (*Dynamix*). There is also the *PayZZage* game which focuses on the links between farming practices and the landscape.

The game board as a shared experience

We also think it is interesting to mention a few English expressions, such as ‘to take on board’, which means to take full account of opinions. Another example is ‘to get on board’, which means to set off for a destination by boat, plane, etc. These expressions evoke movement towards something else, towards an elsewhere. They also refer to the adoption of a different perspective through an experience ‘to be lived’, by moving, taking a step aside or following an itinerary towards a place that will become clearer by the end of the session.