

Chapter 47

Regen-D: Template-Based Games for Sustainability and Regeneration



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47.1 Introduction

Regen-D is a format for creating and playing serious games, and its name comes from regenerative design. Serious games are games for purposes beyond mere entertainment, such as collaboration or education. These games are powerful educational and facilitation tools because players are active in a group as they engage in dialogue with each other and interact with a game environment.

The aim of the Regen-D game series is to present case studies in sustainability and regeneration. In relation to sustainability, the Regen-D remit defines regeneration as going a step further, that is, not only to make sure that future generations and the natural world can be sustained but also to actively repair the damage that has already been done while cultivating new relationships with nature and society.

Each Regen-D game is a separate case study based on the generic Regen-D template. The template allows for an unlimited number of games to be created easily. This makes developing games feasible and accessible for sustainability and regeneration initiatives that would like to use the creative potential of games but do not have specific game design expertise.

The core component of the game is a collection of up to 12 wooden disks with QR codes linked to multimedia files, each of which represents an aspect of the initiative being presented. Players view each multimedia file on a screen, then flip the disk to uncover placeholder pictures on the reverse side, and successively assemble them into a diagram. In addition, three types of tasks are activated via action disks: *evaluating* an element, *linking* two elements, and introducing a new element with a

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joker. The type of disk to be played next is chance selected by spinning the arrow on a selector wheel. Each time a disk is added to the evolving diagram, there is a group discussion to understand the new element and its relationship with the other disks.

This game choreography leads players through the multimedia materials to discover and reconstruct the case study. However, the potential of Regen-D games is not only due to the immersive experience for groups in educational contexts, but it is also a way for projects in sustainability and regeneration to share what they do in an innovative way. The time it takes to design and produce a new Regen-D game is drastically reduced because we can rely on a tried-and-tested template. All that is needed for a new game is to swap the content of the multimedia files and tweak the game rules.

47.2 Transformative Potential

Regen-D games have the potential for sustainability education, for grassroots actors to support their work, and for people to become authors of their own games. The multiple uses are a particular strength of this game format.

The Regen-D series is published by the social enterprise publisher Ishara Press at <https://ishara.uk/regen-d>. Each game has an open-source e-book, from which the game components can be printed and self-assembled. The hardcopy games are available from Ishara Press but are not open source.

The examples below come from the game “Water management systems at Shikha Ecovillage,” which is based in rural eastern India (Panda et al. 2023), and from the game “Local Loop: Collaborative finance for the circular economy,” which is based in north-west England (Woodroof and Green 2024).

As a learning experience, a Regen-D game prompts the players to actively explore the topic of the game instead of being presented with preconfigured content. This leads to a deeper engagement with the case study, as there is ample room for group discussion. Assembling the visual diagram turn-by-turn makes learning a slower-placed, tangible, and engaging experience. The game fosters an inclusive and non-threatening learning environment where the turn-taking ensures active participation.

The Regen-D design is motivated by the belief that learning at a purely intellectual level is not good enough if we truly want to orient people toward a regenerative future. We must involve other human capacities, such as imagination, empathy, intuition, coordination with others, and the will to act. As a serious game, Regen-D has the potential to mobilize such holistic capacities.

Besides educational uses, Regen-D is designed to support grassroots regenerative initiatives, which often start with a small core group of innovators, early adopters, or frontrunners. When additional people subsequently join the initiative, there is an “onboarding” process, which means introducing them to the new context. Regen-D is a creative alternative to conventional onboarding.

By playing through a case study, new team members can learn about its interconnections and complexities. The “Local Loop” initiative needs a sufficient number of local businesses to be mobilized in a network for mutual credit clearing. The underlying financial mechanisms and algorithm are somewhat complex, so onboarding via playing the Regen-D game, with the information broken up into manageable chunks in multimedia form, is more accessible than reading a document or watching a presentation.

On-going grassroots initiatives often find it challenging to document and disseminate their work. This was the case for Shikha Ecovillage in India, which was developed as an off-grid campus with a boarding school for deaf children and chemical-free horticulture (see <https://shicol.in>). Local people were not interested in producing written texts or data tables. Instead, creating a Regen-D game motivated the local team to contribute the necessary multimedia materials.

Shikha Ecovillage also illustrates how Regen-D games allow people to become published authors who would not otherwise have this opportunity. The game content is a multimedia file collection of photos, videos, maps, diagrams, and other mixed media, with no need to write in an academic or formal style. In addition, the game was published bilingually with an English version and a version in the local languages Sambalpuri and Odia. This context has enabled one of the local team members to become a first-time author.

Bi- and multilingual publishing in local languages also means that Regen-D games are accessible to local people, not just to a distant English-speaking elite. This democratization of publishing, in terms of both authors and audience, is an important design feature of the Regen-D series (Zeshan, [forthcoming](#)).

47.3 Application

Regen-D games are played either internally with existing and aspiring members of an initiative, for example, for onboarding, or externally as an educational and dissemination activity, for example in Education for Sustainable Development classes. Playing through a case study takes ca. 90 min. If game materials are self-assembled instead of using a hardcopy game set, this takes about an hour. The QR-code links lead to open-source multimedia files, and a sufficiently large screen is needed as per group size to view them, using a handheld QR scanner or a smartphone. Teachers or facilitators may lead through the game, but groups can also play autonomously.

Regen-D is played in groups of 4–16 players. If there are more than eight players, they should form an inner and an outer circle. Whenever someone in the inner circle has played a turn, they exchange places with a player from the outer circle. Groups larger than 16 need several parallel groups or a larger outer circle. In the latter case, not everyone can play actively, but the whole group may still participate in discussions.

Teachers and facilitators can rely on the open source e-books for preparation. Along with the print-and-play materials for self-assembling the game, each book

includes directions for use and game rules. Where available, the e-book also describes the case study coherently and comprehensively, with links for additional information and resources. Learners can read the book after playing the game, if that is considered useful.

The potential to easily create new case studies in the Regen-D format is just as important as playing them. Because of the time and expertise involved in game design and development, it is often not feasible for people without relevant experience to develop a well-constructed game from scratch. A workable prototype like the Regen-D template breaks down this barrier and allows people to become game authors without prior experience.

Regen-D case studies must fit the remit of the series, which includes fully implemented initiatives, work in progress, and design proposals in sustainability/regeneration. Game designers at Ishara Press guide the authors through the process and technical details of creating a well-balanced file collection and e-book. This takes 4–8 weeks, which may also suit lecturers to undertake as a creative learning activity with university students over a semester (Table 47.1).

Both the multimedia materials and the e-book are peer-reviewed for quality by the international editorial board, which includes both academics and practitioners. E-books with a comprehensive description of the case study are published and indexed via the open-source OAPEN platform at <https://oapen.org> in addition to the Ishara Press website.

Table 47.1 Method overview

Main purpose
Learning from case studies; creating new case studies from the game template
Gained competences
Experience a serious game; learn about regenerative initiatives; actively engage with regenerative thinking; multimedia publishing.
Educational setting
Informal (workshops, game sessions, and classrooms)
Space requirements/restrictions
An empty table with circular seating for four to eight people, or empty floor space if sitting on the floor
Resources and necessary materials
Sufficiently large screen in relation to group size; selector wheel/game spinner and game disks in two sizes (download and self-assembly available)
Number of participants
4–16 players; split into several groups for more than 16 players
Facilitator competences and skills
Background in serious games is useful but not mandatory.
Participants skills/age/competences
Secondary school and older; no specific skill and competence needed
Duration
90 min to play the game
4–8 weeks to develop a new game

References

- Panda S, Panda S, Zeshan U (2023) *Water management systems at Shikha Ecovillage*. Ishara Press, Lancaster, UK. <https://ishara.uk/regen-d-no-1/>. Accessed 21 June 2024
- Woodroof T, Green D (2024) *Local loop: collaborative finance for the circular economy*. Ishara Press, Lancaster UK. <https://ishara.uk/local-loop-collaborative-finance-for-the-circular-economy/>. Accessed 21 June 2024
- Zeshan U (forthcoming) Multilingualism, multimodality and gamification: pathways to democratising educational spaces. In: Bagga-Gupta S (ed) *Palgrave handbook of decolonising the educational and language sciences*. Palgrave Macmillan, London, UK

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