



CENTRE FOR
SYSTEMS
SOLUTIONS



FLOOD RESILIENCE GAME



The Flood Resilience Game lets players experience the complex nature of flood resilience, building their understanding and improving decision making through discussion with others. In this way, participants—such as staff of flood-focused NGO programs—can identify novel policies and strategies to improve flood resilience

Working in flood resilience is challenging. Many different issues must be balanced; community vulnerabilities and capacities must be understood. The game stimulates lively discussion and creates a testing ground where actions or interventions can be assessed, and players can learn from their mistakes without cost.

In the game, players are members of a flood-prone community, experiencing the impacts of flood damage on their homes and infrastructure, as well as the indirect effects on livelihoods, markets, and quality of life. They explore how resilience can be built up with investment in different types of capital—human, social, physical, natural and financial. The benefits of investment in risk reduction and flood preparedness become clear. Critically, the game also highlights the importance of bringing stakeholders together to enhance flood resilience.

The game is now available to play! The game kit—which includes all instructions for playing independently—is [available to download](#) and print, and can also be translated into your local language.

Games are powerful dissemination instruments; with broader outreach than traditional reports, they provide the perfect avenue to engage participants in exploring the challenge of managing and understanding both flood risk and development. The game has been designed to align with the framework of the [Zurich Flood Resilience Measurement tool](#) (but also operates completely independently).

THE FLOOD RESILIENCE GAME

PLAYING AT FLOOD RESILIENCE

People have been playing games for fun for many thousands of years. But recently some have been designed not to escape from reality, but to improve it. As the world is becoming more and more complex, and the future more and more uncertain, serious games can be used as innovative tools for learning, decision making, improving effective collaboration and developing strategies for success. With games, we can communicate complex realities and learn from our mistakes without costs. Games that engage participants have been shown to be very successful and powerful dissemination instruments— with broader outreach than traditional reports.

Flood resilience is the challenge of managing both flood risk and development: to live in harmony with floods. Games provide the perfect avenue for exploring these challenges. The International Institute for Applied Systems Analysis (IIASA), together with the Centre for Systems Solutions (CRS), with the support of the Zurich Flood Resilience Alliance, have developed a game that can help people explore the complex idea of community flood resilience in an engaging way.



The Flood Resilience Game provoking discussion at an NGO workshop in Jakarta, Indonesia

Because games are experienced as something that feels real, more information is retained, learning is faster, and an intuition is gained about how to make real decisions. The Flood Resilience Game helps participants— such as NGO staff working on flood-focused programs—to identify novel policies and strategies which improve flood resilience.

GAMEPLAY

Will your team be able to work together to create a resilient future for the community?

In its current form, the Flood Resilience Game is a board-game played by 8 to 16 players, who each take on a role as a member of a flood prone community. The direct interactions between players create a rich experience that can be discussed and analysed in the structured debrief session, leading to concrete conclusions and actions. This allows players to explore vulnerabilities and capacities—citizens, local authorities and NGOs together—leading to an advanced understanding of interdependencies and the potential for working together.



The Flood Resilience Game ready to be played!

The game draws on research from the Zurich Flood Resilience Alliance on the complex challenges of reducing flood risk and fostering sustainable development. It allows players to experience, explore, and learn about the flood risk and resilience of communities in river valleys. Players experience the impacts of flood damage on housing and infrastructure, as well as indirect effects on livelihoods, markets, and quality of life. It lets them experience the effects on resilience of investments in different types of “capital”—such as financial, human, social, physical, and natural. Finally, players explore the complex outcomes on the society, environment and economy from different long-term development pathways. This highlights the types of decisions needed to avoid creating more flood risk in the future, incentivizing action before a flood through enhancing participatory decision-making.

BENEFITS OF PLAYING THE FLOOD RESILIENCE GAME

By playing the Flood Resilience Game, players:

- ✓ Experience the effects on resilience of investments in different types of “capital” – such as financial, human, social, physical, and natural.
- ✓ Gain a better understanding of the influence of preparedness, response, and reconstruction on flood resilience.
- ✓ See the benefits of investment in risk reduction before the flood strikes.
- ✓ Explore the complex outcomes on the economy, society and the environment from long-term development pathways.
- ✓ Discover the types of decisions needed to avoid creating more flood risk in the future, incentivizing action before a flood.
- ✓ Experience the importance of bringing stakeholders together to enhance flood resilience.

Players experience all these complex ideas with simple and concrete game elements that participants can connect with their daily realities.



Practical Action staff playing the Flood Resilience Game in Lima, Peru

The Game has been designed to align with the **Zurich Flood Resilience Measurement tool** (the Game also operates completely independently). It can be used both for building a better understanding of community assets and capacities as well as for supporting an assessment of a range of potential actions or interventions, and their effectiveness. This results in improved understanding of how different potential actions or interventions related to 5 capitals affect disaster risk, and ultimately might lead to enhanced community resilience to floods and other disasters.

DO YOU WANT TO PLAY?

***After the development and testing period, the game is now available to play!
We have everything available for teams to run the game independently!***

The game kit, together with detailed set-up and moderation instructions, are available to download. Game materials can be printed locally, and tokens are easy to come by. We can also put together a game kit and post it to you (for the price of covering costs only).

The game kit comes with all materials needed to moderate and play the game, including:

- ✓ Clear explanation of the game and all its elements
- ✓ Detailed, step-by-step guide for moderating every phase of the game
- ✓ Clear instructions for all players to use throughout the game
- ✓ Game board and player boards
- ✓ All action cards
- ✓ Detailed instructions for guiding the team through the debrief process

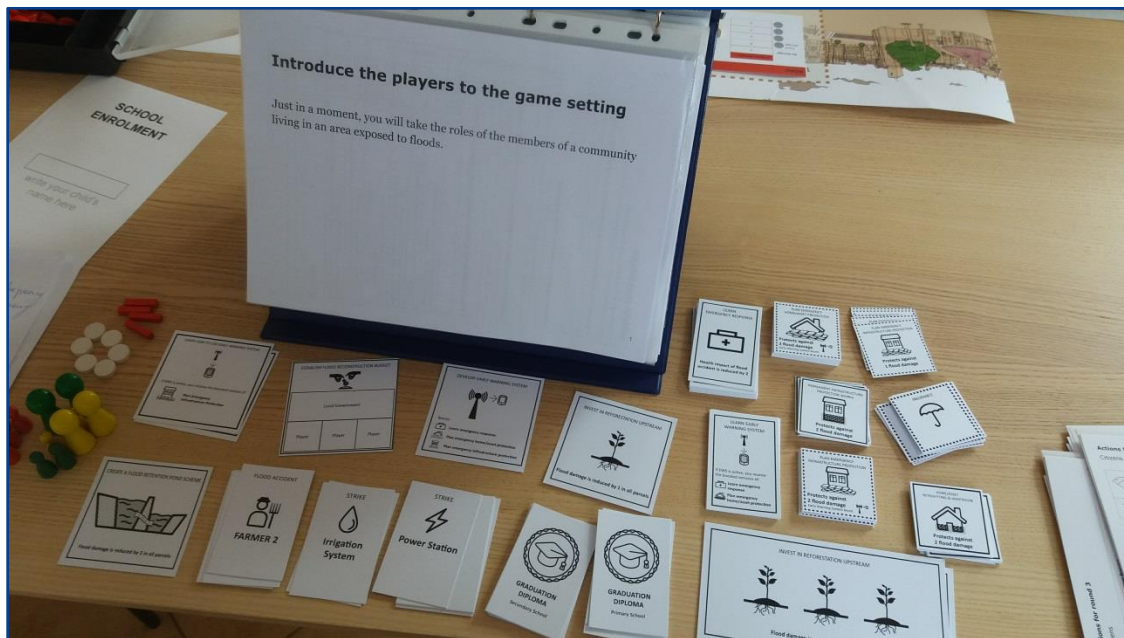


Figure 1 Moderator's view - step-by-step instructions

The game can also be **translated** into your language. We provide a translation template which takes just a couple of hours to fill in.