

Centre  
for Systems  
Solutions

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# EDUCEN

## EUROPEAN DISASTERS IN URBAN CENTRES: A CULTURE EXPERT NETWORK



Cultural factors and cultural diversity may give rise to challenges for the communities that are exposed to disasters. However, if used properly, culture holds solutions applicable to prevent, mitigate, prepare for, cope with and adapt to disaster risks. The project EDUCEN (*European Disasters in Urban Centres: a Culture Expert Network*) focused on the role of culture in disaster and risk management in European cities. EDUCEN was an interdisciplinary consortium consisting of 10 participant organizations from 7 different countries.

In the project, the CRS team was responsible for the development of open simulations used during the case studies conducted, i.e. in Spanish Lorca (exposed to flood risk) and Italian L'Aquila (exposed to earthquakes).

The project was funded from the European Union's Horizon 2020 program.

### DURATION

May 2015 - April 2017

### PROJECT COORDINATOR

Piotr Magnuszewski

### KEY EVENTS

#### February

##### ■ EDUCEN partners meeting and conference in Istanbul

Michalina Kulakowska took part in the EDUCEN project meeting in Istanbul. During the meeting, its participants discussed the topics connected to the organization of the final project conference and the materials (Handbook) prepared by the project consortium.

On the 17th of the February, the one-day conference on the Istanbul case study presented by EDUCEN partner from Turkey - AKUT organization, took place. The participants included the representatives of: the project consortium the Istanbul local administration and the NGOs engaged in empowering people with disabilities.

##### ■ The first test of the *Cultural Memory Game*

Five players participated in the first test of the *Cultural Memory Game* and had an opportunity to assess the level of challenge the game offers. The game session was led by the game's main designer, Łukasz Jarząbek. It was followed by debriefing and a feedback session, which both provided us with valuable comments and suggestions for further improvements. The test participants admitted that the game had helped them appreciate the role of memory of past crises in disaster preparedness.

#### March

##### ■ The second test of the *Cultural Memory Game*

We organized the second test of our new simulation *Cultural Memory Game*. It was a big success! Players praised both the mechanics and the gameplay. The game, though simple in the beginning, became very emotional after a surprising reveal.

The players who took a wrong strategy were bitterly disappointed, whereas more fortunate ones openly showed their excitement. We gathered a lot of feedback during the debriefing session, which will be used as a basis for further improvements of the game.

##### ■ *Gifts of Culture* test

We organized an internal test of the *Gifts of Culture* game. Led by Paweł Antoniewicz, it was a chance to test the latest version of the game and new materials for moderators. During the feedback session afterwards, we collected ideas for future improvements.

##### ■ The third test of the *Cultural Memory Game*

We conducted the third test of our new *Cultural Memory Game*. Before the test we had created an event on Facebook and were more than happy to welcome as many as nine players in the office! The test was once again led by the game's main designer, Łukasz Jarząbek.

The test enabled us to check if new mechanics and materials (such as instructions, boards and cards) are operational and easy to comprehend. The players participated both in the game and in the feedback session. Thanks to it, we gained even more valuable feedback that will help us to improve the game.

##### ■ Final EDUCEN conference

We joined the EDUCEN conference in Dordrecht, Netherlands. We had a chance to see and evaluate the results of each project package and to share our opinion about the final effects of the whole project. It was also a great opportunity to reveal the outcomes of our own work package, which were presented to all participants during the main part of the conference by Piotr Magnuszewski.

Later on, we played the advanced prototype of *Cultural Memory Game* with our partners and invited guests. The main designer of the game, Łukasz Jarząbek, with the support of Michalina Kulakowska, held both the flood and earthquake game version. We were happy to observe that the player's reactions to the game concept and materials were very positively!

#### May

##### ■ EDUCEN Handbook on Culture and Urban Disaster

Although the project *European Disasters in Urban City Centres* has already come to an end, the results of our work still resonate. The EDUCEN *Culture and Urban Disasters Handbook* has finally become available! The Handbook is a printable digital tool whose main design principle is to be as easily and freely accessible to its users as possible. It compiles the knowledge and experience gained through the participation in the EDUCEN project

The Centre for Systems Solutions contributed to the handbook with the chapter *Using games to foster empathy, experience, and learning* written by Piotr Magnuszewski, Łukasz Jarząbek, Aleksandra Solińska, Michał Pająk and Michalina Kulakowska. We hope that our chapter, as well as the rest of the handbook, will not only help widen the horizons of our readers but also make them reflect on questions related to culture and disasters.

# NAURU GAME FOR ACTIVE CITIZENSHIP OF EUROPE



The two-year project *Nauru Game for Active Citizenship of Europe* is funded from the European Union within the *Erasmus+* programme. It has been implemented since February 2017 by the Centre for System Solutions in partnership with the Hungarian Rogers Foundation and the Slovakian organization TANDEM n.o. The main objective of the project is to shape citizens' attitudes and increase the awareness of social participation, sustainable development and climate change among young citizens of Europe. To reach these aims, the partnership is developing innovative internet tools – a multiplayer internet game and an e-learning platform. In 2017/2018, informational events for educators are held in all three partner countries to test the game and its accompanying materials. In 2018, on the other hand, trainings for future moderators are planned in Poland, Slovakia and Hungary to teach them how to prepare a game-based workshop and use the e-learning platform in their daily work with youth.

This project has been funded with support from the European Commission.

## DURATION

February 2017 - January 2019

## PROJECT COORDINATOR

Aleksandra Solińska

## KEY EVENTS

### February

#### ■ *Erasmus+* project: *Nauru Game for Active Citizenship of Youth* has been launched

On April 22nd, 2016 a summary conference was held at the Małopolska Agricultural Advisory Centre in Karniowice. The conference was mainly focused on the joint management of the Natura 2000 area of Dolinki Jurajskie. During the meeting, the results of the project and the outcomes of the participatory mapping were presented and discussed.

An interesting part of the conference was a panel discussion with the students-volunteers who had taken part in the project. They shared their experiences in geological surveying they had been conducting on the inhabitants of Dolinki Jurajskie. They assessed the results as a useful source of knowledge on the needs and expectations of the residents. The participants of the subsequent panel discussion, as well as a plenary discussion, pointed out that the method of participatory mapping is not only interesting but display great potential for being applied in environment protection and spatial planning processes.

### March

#### ■ *Nauru* project kick-off meeting

Last week we organized the first partner meeting within the project *Nauru Game for Active Citizenship of Europe*, hosting the representatives of Tandem n.o. (Slovakia) and Rogers Foundation for Person - Centred Education (Hungary). Together we set out the project goals, played and evaluated *Climate Game 2.0* and arranged the activities for the upcoming months.

There are 3 more partner meetings in the schedule of the project - we are looking forward to them!



## July

#### ■ *Erasmus+* - Project meeting and *New Shores* game test in Budapest

The work on the project *Nauru Game for Active Citizenship of Youth* is in full swing. During the second partner meeting we were discussing the progress in the development of *New Shores - Game for Democracy* and the accompanying educational materials in picturesque Budapest. First, we tested new graphics and functionalities of the game with 20 educators and youth leaders. While striving to keep the balance between the nature and development in the game's world, the players managed to have great fun too! All their comments and suggestions were further discussed during our international team's meeting. Brainstorming and exchanging thoughts, we came up with a lot of new ideas how to make *New Shores* an effective tool for shaping civic attitudes among youth.

#### ■ *Erasmus+* Project Meeting in Slovak Tatra Mountains

We live in a world of dynamic changes that affect global policy, economy and ecology. How not to get lost and be part of these processes, actively shaping our common future? We addressed these and other questions at the third transnational project meeting in Slovakia.

In the beautiful scenery of the Slovak Tatra Mountains, we were discussing what tools teachers need to involve their students in these processes. The CRS team together with their partners, Slovakian TANDEM and Hungarian Rogers Foundation, tested the next iteration of *New Shores - a Game for Democracy* with twenty current and future teachers and youth leaders. Their valuable comments will surely contribute to the improvement of the game and other innovative tools that will be part of the project.

## November

#### ■ *New Shores* test with young learners in Wrocław

We run another test of *New Shores - a Game for Democracy*, this time with the members of the local Kids and Youth Club run by the Association Żółty Parasol. After the game, kids participated both in debriefing and feedback sessions. They did a great job, and their valuable comments allowed our team to set priorities for the further development of the game.

# SUSTAIN

## GAME-BASED LEARNING ON URBAN SUSTAINABILITY

### DURATION

October 2017 - October 2019

### PROJECT COORDINATOR

Łukasz Jarzqbek



The objective of the SUSTAIN project is to commence and promote sustainable literacy among students of higher education (and young people in general) through an innovative and student-centered education programme.

In the SUSTAIN project, the Centre for Systems Solutions is tasked with translating the simulation models into the game elements, mechanics and playing scenarios. The result of this “translation” will be summarized in an e-book. Furthermore, we will prepare the state of the art of board games that deal with sustainability issues.

This project has been funded with support from the European Commission.

### KEY EVENTS

#### October

##### ■ Start of the *Erasmus+* project SUSTAIN

*Erasmus +* project SUSTAIN was officially launched!

#### December

##### ■ *Erasmus +* Project Sustain kick-off meeting

Łukasz Jarzqbek and Michalina Kućakowska took part in a kick-off meeting for our new *Erasmus +* project SUSTAIN. Together with the representatives of the coordinating and partner organisations, the University of Macedonia, System Dynamics Italian Chapter, Society for Responsible Consumption - Romania, CERTH/HIT and Ergo Ludo Editions, we shared our ideas and hopes regarding the collaboration in the project, and discussed the next steps and tasks.

# CATALYST

## SUSTAINABLE CITIES - RESPONSIBLE LEADERSHIP

### DURATION

November 2017

### PROJECT COORDINATOR

Jakub Damurski

Transformative processes are characterized by the complexity inherently connected with nested systems and deriving from constantly advancing technology, uncertainty, and a multitude of actors and possible future scenarios. This reality may be overwhelming to managers and leaders, unveiling the necessity of establishing a new kind of leadership to steer transition processes in a more innovative and efficient way.

These new leaders need to understand social systems not as intrinsic realities, e.g. hierarchies or structures which can be “managed” and “shaped”, but rather as social constructions which may be co-created and to which a relational perspective may be applied.

This six-day Catalyst course integrates three elements: Context – Framework – Leadership to provide you with a comprehensive background which will prepare you for challenges related to transformative processes. Throughout the course you will have the unique opportunity to navigate a “six step cycle” and put into practice strategies and tools which will help you understand the system within your specific problem operates. As a result, you will be able to develop new solutions and verify them in the multi-actor and multi-level environment on your way to a sustainable business (be it a product or a private/public service).

This project has been funded with support from the European Commission.

### KEY EVENTS

#### October

##### ■ The first workshop within the *ACCURENT* project

We launched registration for the *Catalyst: Sustainable Cities - Responsible Leadership* course.

An intensive, six-day course aiming at increasing the capacities of practitioners to walk through the complexity underlying current processes of socio-technological transition in European cities.

The course will equip you with tools, knowledge and skills to lead your own innovative and transformative projects. As a result you will know how to develop and implement your own initiative and adapt effective solutions.

The experts will share their know-how on transformative processes carried out in specific sub-systems (such as energy, mobility, waste and water) and show how those sub-systems intertwine in a broader context of a city. An intrinsic part of the course is an intensive e-learning support (pre and after the course).

The deadline was the 15th of October.

## SPOTLIGHT

### INNOVATIONS FOR LOW CARBON TRANSITIONS – METHODS AND TOOLS FOR WORKING WITH PEOPLE, GROUPS, ORGANISATIONS, AND SOCIETY

The main learning objective of the *Spotlight* workshop is to support the participants in understanding human and social challenges, facing their transition initiatives and in choosing the tools and methods to address them.

The course builds on many topics and approaches used by the coaches, including system transition and complex systems, innovation, sustainable development, capability building, renewable energy sources, energy transition, system dynamics and social network analysis. The framework for the workshop follows 5 steps of Design Thinking - Empathy, Define, Ideate, Prototype, and Test.

First, through the gaming approach, the participants step right into the middle of the energy transition. For that purpose the *Energy Transition Game* is used. Assuming new roles, players experience a variety of challenges, interdependencies and trade-offs involved in launching new public and private initiatives. This may help them develop empathy and better understanding of what is needed to achieve success at individual, group, organization, and society levels.

Drawing on this experience, in the next steps the participants are introduced to methods and tools for synthesizing their specific problem definitions, stimulating free thinking and expanding the problem space while generating new ideas.

After the workshop, prototyping their social innovation and testing it in the real settings will generate new learnings. To multiply the effect of the workshop, the participants receive free access to the platform where they can discuss and share experience with the broader community of change agents.

This project has been funded with support from the European Commission.

#### DURATION

October 2017

#### PROJECT COORDINATOR

Jakub Damurski

#### KEY EVENTS

##### October

- We launched registration for the *Spotlight: Innovations for low carbon transitions – methods and tools for working with people, groups, organisations, and society course*

While there are many enthusiasts of innovations driven by technology, the history shows that all successful transformations were social in nature. It is also known that many transformations fail, and not one innovation falls short of making the breakthrough.

Today is the time when society needs successful innovations for low carbon transitions - a step change that will adjust the environmental footprint, improve the quality of life and economic viability. The objective of this intensive two days course is to take the participants through 5 steps of Design Thinking fast track. The workshop is designed to strengthen the success factor of participants' individual innovative ideas. You will work on your own case.

An intrinsic part of the course is *Energy Transition Game* - a learning environment, where - while acting in a role with other players - you will experience a variety of challenges, interdependencies and trade-offs connected with launching new public and private initiatives. This will build your empathy and better understanding of what is needed to achieve success at individual, group, organization, and society levels.

The deadline was the 9th of October.

## PIONEERS INTO PRACTICE

The Centre for Systems Solutions is a part of *Pioneers into Practice* programme since 2013. During this time it acted both as a sending and hosting organization. It provided placements for Pioneers from various European countries, including the United Kingdom, Germany, and Hungary.

From 2014 Centre for Systems Solutions is also involved in mentoring activities within *Pioneers into Practice* programme. Michal Pajak took up the role of Climate KIC Regional Coach. His responsibilities involve guidance and counseling in Pioneers' Regional Assignment. He conducts workshops in the area of Transition Theory and its applications to help Pioneers introduce it into their work.

During this collaboration, multiple games developed and applied by the Centre for Systems Solutions were introduced to *Pioneers into Practice* workshops. It included *Lords of the Valley*, *Climate Game*, and *Amoeba*. All of them were positively received by the participants.

The project is implemented within the framework of the *Climate-KIC*, funded by the European Commission. *Climate-KIC* (*Climate Knowledge and Innovation Community*) is a Europe's largest public-private innovation partnership focused on climate change, consisting of dynamic companies, the best academic institutions, and the public sector.

#### DURATION

2013 -

#### PROJECT COORDINATOR

Michał Pajak

#### KEY EVENTS

##### February

- *Pioneers into Practice 2017 – Coaches Call*

The Centre for Systems Solutions, as a *Climate-KIC's* affiliate partner, launched the recruitment process for coaches willing to "lead the learning" about transition thinking and innovation systems, and to support both Pioneers & Hosts across its network of European delivery locations. The deadline for submission was 12:00 (CET) 28.02.2017.

##### November

- *Pioneers into Practice Final Workshop*

The *Pioneers into Practice* Final Workshop marked the closing of the 2017 edition of the programme and served as a summary of the participants' ideas and reflections. The first day was focused on discussing the outcomes of two main practical activities: the international placement and the group projects. The second day was devoted to reflecting on the main lessons learned, the overall programme and potential follow up, both at a personal level and at *Climate-KIC* level. Finally, it provided some time for pioneers for networking and sharing their experiences.



## GAMES4SUSTAINABILITY

*Games4Sustainability* platform is a guide to games and social simulations that can be used in the sustainability education and transition planning contexts.

The *Games4Sustainability* blog collects a variety of success stories on how sustainability professionals, academics and organizations make use of social simulations and games in their areas of activity. The *Gamepedia*, on the other hand, enables users to find a perfect match for their needs from among 100+ games and simulations arranged by the Sustainable Development Goals.

**DURATION**  
2014 -

**PROJECT COORDINATOR**  
Piotr Magnuszewski

**KEY EVENTS**  
March

■ **Water Games - Centre for Systems Solutions and IIASA celebrate World Water Day together!**

It seems to us that we have unlimited access to it. All you have to do is turn on the tap or buy a bottle of it in any store. Fresh water, the resource that is not only essential to life but, to some inhabitants of our planet, hardly accessible. It is estimated that 663 million people in the world live without clean water.

*Water Games* is a joint initiative of the International Institute for Applied Systems Analysis (IIASA) and the Centre for Systems Solutions (CRS) to celebrate the World Water Day 2017 (WWD 2017). We have collected and described a number of games on water challenges. These games differ with respect to time required to play, the number of participants and the type (computer, board, or role-play ones).

## ADDRESSING ENERGY TRANSITION GAPS IN CLIMATE AND ENERGY MODEL REGIONS OF AUSTRIA THROUGH POLICY CO-DESIGN

The two-year project *Addressing Energy Transition Gaps in Climate and Energy Model Regions of Austria Through Policy Co-Design* is funded by the Austrian Climate Research Program (ACRP). It has been implemented since June 2017 by the International Institute for Applied Systems Analysis in partnership with the The Wegener Centre for Climate and Global Change and Centre for Systems Solutions.

The main objective of the project is to analyze the existing policy implementation gap of Austria's CEM program from the three angles as a way to further accelerate Austria's transition to low carbon future. The first angle focuses on the underlying contextual factors, including overarching governance landscape and heterogeneous actor group motivation. The second one looks into strategic considerations that hinder energy transition as a collective action problem. The third angle takes into account user-experience and design considerations that facilitate voluntary actions. These goals are expected to be reached via stakeholders' interviews and mapping that capture the context of the energy transition in CEM Baden and CEM Freistadt. This data is used to create policy exercises that address the specific challenges of these two regions and enable local stakeholders to reflect on their current situation as well as explore potential solutions to their current problems. In this project policy exercises will be combined with design thinking workshops that will help stakeholders work on the solutions for they present challenges.

**DURATION**  
July 2017 - May 2018

**PROJECT COORDINATOR**  
Michał Pajdak

**KEY EVENTS**  
July

■ **CoDesign Kick-off meeting was held on 10th of July of 2017 at International Institute for Applied Systems Analysis in Laxenburg, Austria.**





## GAMES

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## CULTURAL MEMORY GAME

Nowadays a thriving metropolis, an anonymous city *Cultural Memory Game* is set in, witnessed a severe disaster almost a century ago. However, with an influx of new people and no major disaster having occurred since then, players (assuming the roles of city inhabitants) are blissfully neglecting any need for implementing prevention and preparedness measures...

until the next disaster strikes.

The game draws on the concept of cultural memory as the key factor contributing to community resilience. The bits and pieces of past catastrophic events are scattered around the city, offering prompts to those who are ready to relate facts. Will you use your time to visit the Local Museum or would you rather opt for a shopping spree? The choice is yours, but it will certainly affect your future!

The game has been played by the inhabitants of earthquake-exposed Volos (Greece) and flood-prone Dordrecht (the Netherlands). The game is a useful tool available to teachers and educators to raise the awareness of the role of cultural memory in the face of adversity.

The game was designed and developed in the project *European Disasters in Urban centres: a Culture Expert Network* within the EU Horizon 2020 programme. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 653874



## THE WORLD'S FUTURE GAME

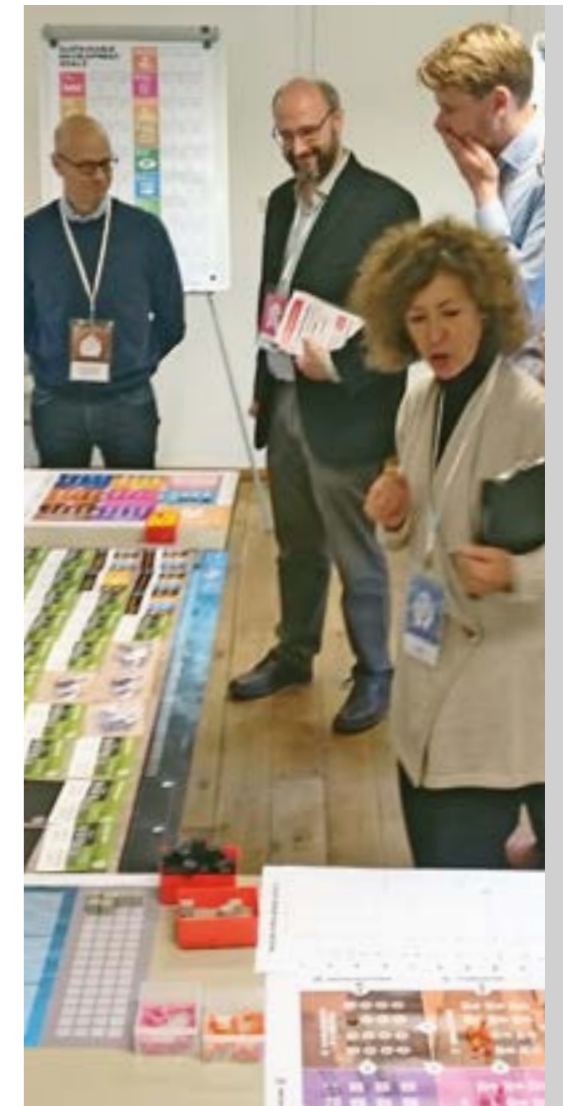
In 2015, the global community set 17 major targets for the year 2030 – the Sustainable Development Goals (SDGs) to end poverty, protect the planet and secure prosperity for all.

*The World's Future Game* is an interactive role-playing simulation which enables players to face the great challenges of our time: How can we use limited resources to achieve the goals? Is it possible to meet competing needs without trade-offs? Can food production provide for all without negative effects on essential natural ecosystems? How can we increase our efforts to adapt to and mitigate climate change, at the same time generating enough energy for all? And what role do we – consumers, producers, governments and NGOs – play in the implementation of the goals?

You can shape the future of this micro-world and improve the wellbeing of the planet and its inhabitants. Dive into the role of a consumer, an energy or food producer, the federal government or an organization of civil society and strive for the global goals together.

Each player takes on a unique role in this complex global landscape. As such, the simulation offers space to develop creative strategies and to cooperate with other participants. It thus not only simulates the complexity of the global system but also triggers new ideas which can affect the real world.

*The World's Future Game* is developed and run by the International Institute for Applied System Analysis (Systems Thinking for Transformation – a IIASA exploratory project) and the Centre for Systems Solutions (CRS).



## InDILEMMA GAME

Game theorists devote their lives to studying the dynamics of conflict resolution and cooperation. Meanwhile, dancers devote their lives to generating movement through cooperation. Could these two seemingly different worlds complement each other in a meaningful way and give unprecedented expression to game theory? And if so, what impact could this new alliance generate? These were some of the questions that led Gloria Benedikt, IIASA Associate for Science and Art and the scientific committee at IIASA to embark on *Project InDilemma*, an unprecedented attempt to fusion game theory with dance through a co-creation process between scientists and artists. *InDilemma* was presented on the stage as part of the closing plenary session *Transformative pathways to sustainability: from perception to changing behavior* of the Alpbach Political Symposium.

The *InDilemma* performance was developed in partnership between Gloria Benedikt, IIASA Associate for Science and Art, the scientific committee at IIASA (Ulf Dieckman, Director, *Evolution and Ecology Program*, JoAnne Bayer, Acting Director, *Risk and Resilience Program*, Elena Rovenskaya, Director, *Advanced Systems Analysis Program*, Karl Sigmund, Senior Research Scholar, and Piotr Magnuszewski, Research Scholar, in the *Evolution and Ecology* and *Risk and Resilience* programs, respectively) and the CRS.



Photos courtesy of Luiza Puiu



## BENGALURU QUEST

In the *Bengaluru Quest* participants take on the mantle of the city council at departments: water, health, business, environment, energy, and infrastructure. Bombarded with information from various interest groups (citizens, NGOs, scientists, business, etc.), they have to address their pressing problems and expectations, and propose effective solutions. Burdened with the responsibility for the city's future, they are the ones who can diagnose the situation, frame critical issues, develop relevant policies and pass them through the legislative process, and finally, face their consequences. The city is evolving in the direction set by participants' decisions. A vivid societal feedback adds the sense of urgency in the game, spurring its dynamics and heating up emotions.

The *Bengaluru Quest* is an environment for exploring behavioral, social and institutional challenges of sustainability transformation. Participants work on the real-world case with a universal relevance. They use their knowledge and creativity to face a complex, ambiguous, and uncertain reality of modern policy making. The interactive and dynamic character of this process leads to a deeper sharing and emergence of new creative ideas from the great minds who will join the workshop.



## P.I.P.E.S - PUBLIC INFRASTRUCTURE PARTICIPATORY ENGAGEMENT SIMULATION

The *Public Infrastructure Participatory Engagement Simulation - P.I.P.E.S.* was designed to recreate essential features of real life situations, highlighting decision-making challenges and their consequences. It compresses time and space so that a trajectory of a series of negotiations, decisions and impacts will emerge fully embedded within rational and value-based judgments and goals of participants. Players take the roles of local authorities, infrastructure managers and citizens, whose needs create a complex net of interrelations. The authorities, under the constant pressure from citizens, gather resources through taxes and then negotiate what water solutions the budget should be spent on.

Often it happens that promising ideas targeted at root-causes of a problem and long-term risk reduction meet with opposition from these players whose priorities or risk perception differ. The game aims at building mutual trust between government agencies and between government and local communities. Through understanding and cooperation players learn how to face the dangers related the aging water infrastructure together.



## NEW SHORES - A GAME FOR DEMOCRACY

*New Shores: a Game for Democracy* is an online multiplayer game that takes players on a quest to settle on a green, vibrant island. Wild forest covers its surface, hiding rich coal deposits underneath.

Free to govern themselves, players can communicate and collaborate - or go through the game without giving much concern to the others. Using coal can dramatically improve the island's development, but what will be the cost? Climate and democracy shouldn't be taken for granted.

As with all human activities, progress comes with a price. The further in the game the players get, the more difficult it becomes. Will they try to multiply their personal wealth or rather work for the public good? Will they exploit the coal deposits and gamble with the climate change? Or maybe they will play it "green"?

*New Shores* is a game about experimenting with different strategies while negotiating, cooperating or competing with other players who are not always sympathetic to your cause.

*New Shores* was created under funding from the *Erasmus+ Programme* of the European Union. The game is used to promote sustainable development and pro-ecological attitudes as well as social and civic competences, sense of entrepreneurship and basic science and technological skills among the young citizens of Europe. *New Shores* is based on the *Climate Game* that has been played in Poland, China, Hungary and in many other countries, as part of many workshops focused on sustainability and climate change.



## CLIMATE AND SOCIETY GAME (PRAJNA SHIP)

Climate change is the number one source of anthropogenic disasters, and with no consistent strategy to address this problem globally, it is bound to escalate in the future.

Triggered by a development vision centered on direct economic growth rather than on long-term wellbeing, climatic changes are intrinsically connected with risk-blind investments and land misuse. The problem becomes even more complex if we decide to look at it from a broader perspective, revealing the whole spectrum of global challenges it is related to, such as constantly growing population, unstable economics, migration waves and international conflicts.

The *Climate & Society* game ventures to embrace this complex landscape of inter-related issues in one exciting and eye-opening gameplay. The main objective of the game is to make players experience not only the consequences of climate change but also those social factors (e.g. inequality, prejudice, or exclusion) that hinder efficient transformation to renewable sources of energy. To make this problem tangible, players are divided into three nations whose levels of prosperity and economic development vary between relative wealth and extreme poverty. Despite these evident inequities, one thing affects all: climatic changes, which pose a threat to assets, properties and health. Will a potential misfortune act as a unifier, directing players' actions towards common objectives and arousing a need for cooperation?

This four-hour simulation experience offers a unique possibility to immerse in a „real-life“ situation. By playing and testing strategies rather than by studying dry facts, participants personalize abstract concepts of climatic related issues and get a first-hand experience of social inequalities. Therefore, *Climate & Society* game holds a great potential to be an awareness-raising tool which may lead to a significant change in attitudes and behaviors. An additional advantage of the game is its universality and flexibility: it can be easily adapted to suit specific needs and may be played with groups of different sizes (up to 150 people in one session!) No previous knowledge on social or climate related topic is required.



## OTHER EVENTS

### January

#### ■ *Energy Transition Game* during *Climate Fellowship* meeting

Over 20 *Humboldt Climate Protection Fellowship* members participated in the *Energy Transition game* during the final seminar of the *Alexander von Humboldt Foundation Climate Protection Fellowship*. The game workshop was organized in collaboration with THEMAT and Wuppertal Institute with financial backing from Deutsche Bundesstiftung Umwelt (German Federal Environmental Foundation). You can check out the live tweets from the game at [@et\\_game](#) and [#etg\\_humboldt](#) on Twitter. Also, be sure to learn more about *Climate Protection Fellowship* [here](#).



### February

#### ■ *Climate-KIC Polska* partners meeting

Piotr Magnuszewski participated in the *Climate-KIC Polska* partners' meeting in Warsaw, Poland. During the meeting, Piotr showcased the results of the cooperation between the Centre for Systems Solutions and *Climate-KIC*. He focused mainly on our activities in the *Pioneers into Practice* program, regional courses and major projects where games, such as *Laudato Si* and *Energy Transition Game*, were used.

#### ■ Test of the *Water-Energy Nexus Game*

We organized an internal test of the *Water-Energy Nexus Game*. Led by Michał Pajqk, the main game's designer, the test was an opportunity to evaluate new mechanics and elements. The testers had been selected from the people who were not engaged in the designing process of this particular game. In *Water-Energy Nexus Game* players face the biggest challenges of the transboundary management of the water-energy nexus.

#### ■ *Climate-KIC* meeting in Frankfurt

Piotr Magnuszewski participated in the *Climate-KIC* meeting in Frankfurt. The *Climate-KIC* partners from different parts of Europe and representatives of various *Climate-KIC* had a chance to follow up the *Climate-KIC* activities.



## March

### ■ *Water-Energy Nexus Game* prototype test at IIASA

The test of *Water-Energy Nexus Game* prototype was organized in cooperation with IIASA in Vienna. For Centre for Systems Solutions it was a good chance to learn what experts think of the role-play simulation. To our joy, the test was very successful, and players liked the prototype a lot! The newly created game materials met with enthusiasm, and some participants expressed strong interest in using the game in their projects.

Back in Wrocław, we will now focus on fine-tuning the prototype. The next big event where *Water-Energy Nexus Game* will be in focus is the Nexus conference in Dresden in May!



## April

### ■ *Climate and Society Game* test at BOKU Centre for Development Research

In our today's world, rapid environmental and societal changes, such as global warming, ecosystem and biodiversity degradation, overpopulation or economic crises, are highly interconnected. Tracking back the root causes of current problems cannot be always possible. However, there is a possibility to explore their future trajectory by the means of *Climate and Society Game*!

The game's first test was held at the Centre for Development Research (BOKU) in Vienna. It was organized in collaboration with BOKU - Universität für Bodenkultur Wien, plenum, Pioneers of Change and Kwan Um Zen Schule Österreich. Thirty people from all over the world (South Africa, Kenya, Poland, China, Germany, Mexico and Austria) gathered to take part in this social simulation. Thanks to the strong and enthusiastic engagement of the players, we had lots of fun - time passed all too fast! Moreover, we received very positive feedback and got plenty ideas for redesign and improvements. Next stop for the game will be Berlin in June/July!



## May

### ■ Test of *P.I.P.E.S.*

In some parts of the world, especially those who face economic crises, community leaders struggle to provide good-quality water to the locals or to maintain the water infrastructure in decent condition. Our new role-playing simulation *P.I.P.E.S.* (*Public Infrastructure Planning and Engagement Simulation*) was designed to explore this problem. The simulation is the result of collaboration between Joseph Hamm of the Michigan State University, and Centre for Systems Solutions' game specialist, Michalina Kutakowska.

Last week, we organized the game's prototype test in our office in Wrocław. The participants had the chance to assume the roles of community members and to explore a number of solutions to water quality challenges.



### ■ *Nexus Game* session at Dresden Nexus Conference

The Centre for Systems Solutions attended the Dresden Nexus Conference *SDGs & NEXUS APPROACH: Monitoring and Implementation*. As part of the event, we engaged around 20 people from all over the world in our *Nexus Game* workshop. Besides learning about the practical application of the nexus approach, participants also had the chance to train communication and collaboration, strategic thinking and problem solving during the role-playing simulation. After the game session, many players showed strong interest in applying *Nexus Game* into their educational activities!



### ■ *The World's Future* prototype test in Vienna

We tested the early prototype of *The World's Future*! The game was conducted with the assistance of Bundes Jugend Vertretung in Vienna. The participants included people associated with this organization as well as specially invited guests.

### ■ *Platform Value Now*

The Centre for Systems Solutions created an online multiplayer computer game for the International Institute for Applied Systems Analysis (IIASA) - *Platform Value Now*. Players become the owners of companies that would like to create a business platform. They discuss and decide on possible investment strategies and cooperate in order to adapt to the changing world situation.



## June

### ■ Nexus Game session at African Development Bank in Abidjan

A *Nexus Game* session was held at the African Development Bank office in Abidjan, Ivory Coast. The gaming workshop run by Piotr Magnuszewski enabled the AfDB's employees to explore the water-energy-nexus from different perspectives. While playing as stakeholders from two bordering countries, players discovered that the game shares many similarities with the situations and problems they challenge in their day-to-day work.

The game was very well received. We thank all of the players for a warm welcome and enthusiastic approach to our game. We are looking forward to future collaboration.

The African Development Bank connects many African countries in an overarching goal is to spur sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction.



### ■ The World's Future at the OECD headquarters, Paris

We teamed up with International Institute for Systems Analysis (IIASA) and Organisation for Economic Co-operation and Development (OECD) to organize a gaming session of *The World's Future* game.

*The World's Future* game is an experimental playground for learning and understanding synergies and interconnections between Sustainable Development Goals. This is why the game was played as part of the SDG Lab. Our observations suggest that the game fostered players' understanding of the Policy Coherence for Development approach, especially in the context of SDG implementation, and helped them identify possible areas of action.



## August

### ■ Stockholm Resilience Conference

The Centre for Systems Solutions had their input into this year's Stockholm Resilience Conference! Piotr Magnuszewski contributed to the conference with his presentation *Simulation games as tools for handling cognitive and social complexity in the context of sustainability transition*. During the presentation, Piotr was explaining how social simulations can be used to understand stakeholders' cognitive processes and the complex interactions they undertake.



The conference's participants had also a chance to see and read the poster *Navigating Conservation-Development-Disaster Complexities in Social-Ecological Systems Using Role-play Serious Gaming* created by Piotr, Wei Liu, Yidan Yang and Nan Cheng. The Stockholm Resilience Conference is organized by the Stockholm Resilience Centre and Resilience Alliance on triennial basis since 2008. During Resilience 2017, the participants discussed resilience as a key lens for biosphere-based sustainability science.

### ■ The World's Future at Alpbach Political Symposium

The Centre for Systems Solution opened this year's Alpbach Political Symposium with our new game, developed in collaboration with the International Institute for Applied Systems Analysis. *The World's Future Game* enables players to shape the future of in-game micro-world and to improve the well-being of the planet and its inhabitants. With the big picture obtained thanks to the game, the Alpbach Political Symposium's participants could easily jump into topics presented in Alpbach during next few days.

The session was led by Piotr Magnuszewski with the assistance of Aleksandra Solińska and Gerid Hager (IIASA). The Alpbach Political Symposium is dedicated to the today's world key challenges and to presenting innovative ideas for politics and policy-making in the 21st century. Every year, more than 20 partner organizations from Austria, Europe, and the USA contribute their expertise and knowledge to the event.

### ■ Bengaluru game session during the meeting of the Alpbach-Laxenburg Group

The Centre for Systems Solutions had a privilege to organize a *Bengaluru Quest* session during the meeting of the Alpbach-Laxenburg Group. We teamed up with the International Institute for Applied Systems Analysis to facilitate the simulation based on the case study of the city of Bengaluru, India.

Scientists, politicians and business leaders from all over the world put their heads together to try and solve some issues related to the environmental crisis. The session ended with a very interesting conclusion: the decisions not always stem from rational thinking, but are often made under social and time pressure.



The Alpbach-Laxenburg Group is a joint initiative by the International Institute of Systems Analysis and European Forum Alpbach, launched in 2013. The main goal of the group is to support “transformations towards sustainability by creating and communicating positive narratives for sustainable development and business opportunities, grounded in cutting edge international system-science.”.

■ **InDilemma: a dance-science performance – European Forum Alpbach**

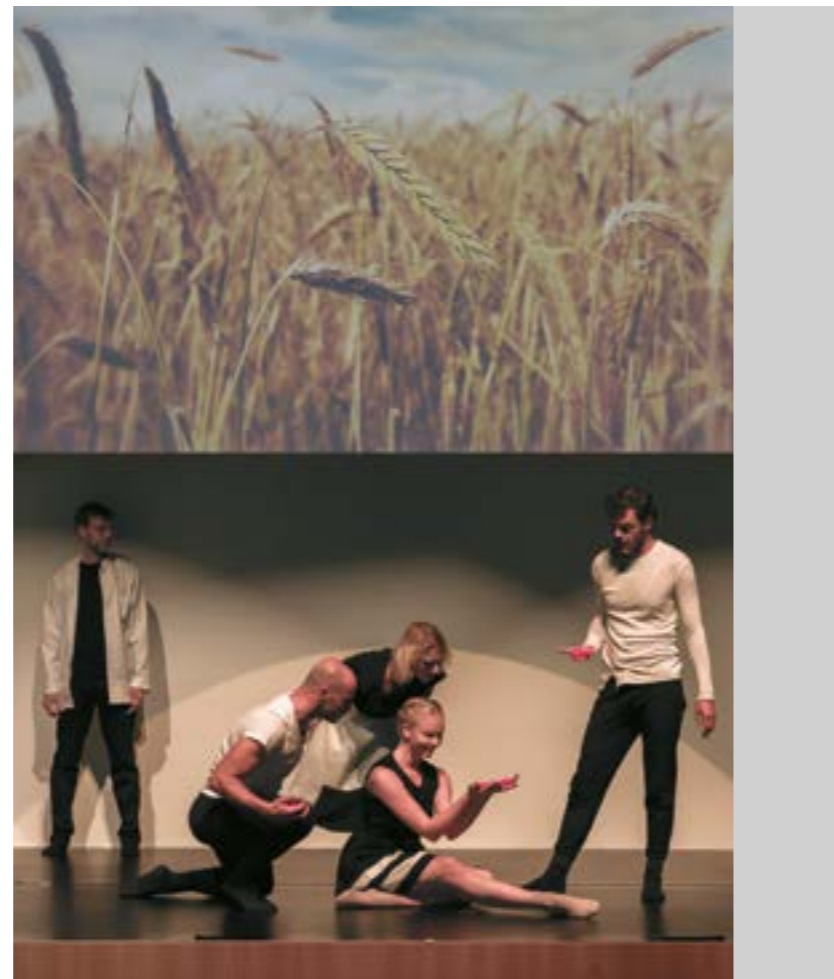
The Centre for Systems Solutions had a chance not only to contribute to the opening act of the Alpbach Political Symposium, but also to take part in creating the emotionally moving final act of the conference. Piotr Magnuszewski participated in the *InDilemma* project led by Gloria Benedikt from the International Institute for Applied Systems Analysis.

The *InDilemma* final act was a mix of a beautifully choreographed dance performance and a game in which the audience decided how to develop the narration.

While presenting the main ideas behind the Game’s Theory, the *InDilemma* performance touched on inequalities, shrinking resources and living space, leaving the audience with much to reflect on.

*InDilemma* was part of the closing plenary session *Transformative pathways to sustainability: from perception to changing behavior* of the Alpbach Political Symposium.

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## September

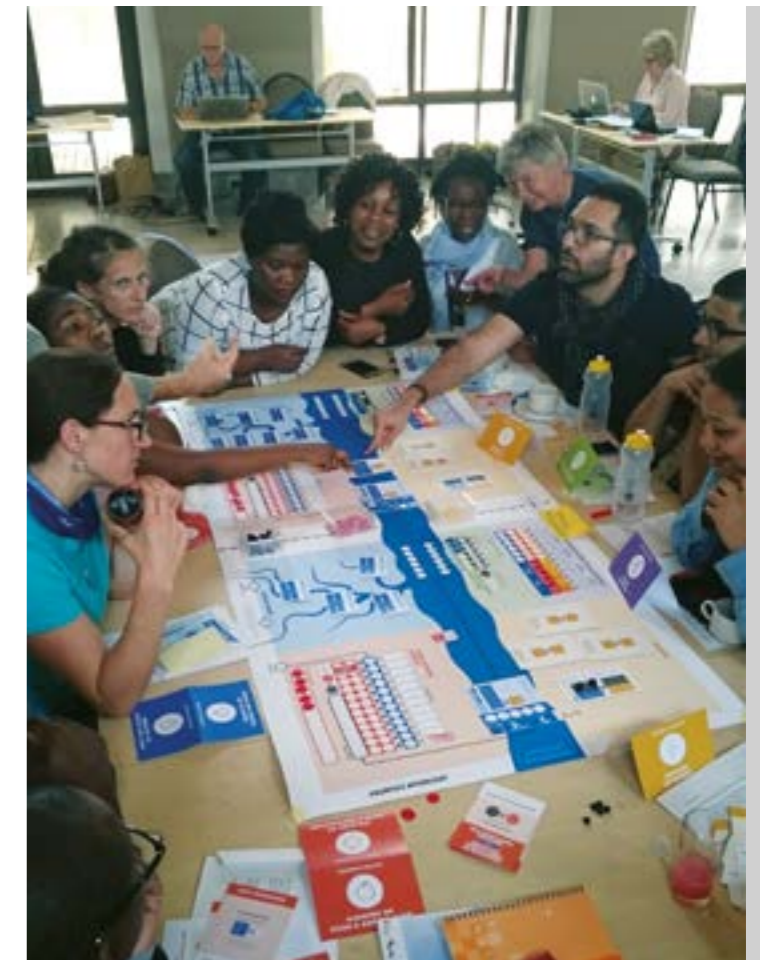
■ **Integrated, independent, inspiring - Southern African Systems Analysis Centre (SASAC)**

*Integrated, independent, inspiring* these were the leitmotifs of this year’s Southern African Systems Analysis Centre’s *Emerging Researchers Program*, which was launched 20 August 2017 in Johannesburg, South Africa!

This three-week program gathered attention from many people interested in increasing their systems thinking skills. Besides exploring the system approach, the participants had an opportunity to practice leadership and collaboration skills through a series of workshops and seminars by Mary Scholes, Ulf Dieckmann, Adam French, Micheal Gastrow and many other respected scholars.

One of the tools used during the program was our simulation, *Nexus Game*, facilitated by Piotr Magnuszewski. The game was previously played in Austria, Germany and in African Development Bank headquarters in Ivory Coast. The *Nexus Game* once again induced positive reactions from the players! We hope that it won’t be the last time our game is used in South Africa!

The SASAC program, launched in 2016, is being implemented by a consortium of four universities, namely the Universities of the Western Cape, Limpopo, Witwatersrand, and Stellenbosch.



## October

■ **Prajna Ship Game (Climate&Society Game) debut - Whole World is a Single Flower conference**

The *Whole World is a Single Flower* conference was a meeting of 150 Buddhists from all around the world. One of its goals was to discuss the state of the planet. Within the session *Green Dharma*, the participants strived to find ways to encourage and implement the global transformation towards sustainability. To foster the discussion, the *Prajna Ship* game was introduced and led with the support from the Centre for Systems Solutions. It provided the participants with a playful environment for practising collaboration and collective decision-making. The *Prajna Ship* gathered more than 100 players and enabled them to explore and apply Buddhism Zen wisdom to support sustainability transition. The players assumed the roles of governments and community members, and immersed in mock conflicts that reflect the key aspects of the real world challenges.



■ **The World's Future Game in Brussels (European Commission)**

*The World's Future* is a sandbox for practicing skills required on the way to meet the 17 Sustainable Development Goals. And is there any better place to explore this challenge than the European Commission's headquarters?

We had a pleasure to organize *The World's Future* workshop during the "Away Day" for the employees of the Directorate-General for International Cooperation and Development (DG DEVCO) on the 23 and 24 of October.

Piotr Magnuszewski and Gerid Hager from IIASA created enough space for experimenting with the ideas behind Agenda 2030. Hopefully, *The World's Future* will contribute to building an SDG-team spirit for our future cooperation within DEVCO and beyond.



December

■ **Centre for Systems Solutions trip&workshop**

We left our office in Wroclaw to enjoy a weekend in the Polish Góry Sowie. But first, we started off with a whole-day workshop during which we summarized the passing year and its impact on our organization. On the next day we went hiking in the mountains. With our batteries fully recharged, we are ready to face the challenges of the upcoming year 2018!



■ **New Shores in US**

Marta Magnuszewska led the *New Shores* game session at the Cambridge Zen Center. It was the United States debut of the game! The participants were happy to test a new potential tool for teaching and learning about biodiversity, climate change, and democracy.

Thanks to their enthusiasm, we received some feedback on both the game and workshop, which will help us prepare more user-friendly game-related materials.

■ **InDilemma OSCE Ministerial Council in Vienna**

We took part in the OSCE Ministerial Council in Vienna where we presented a slightly modified version of *InDilemma* - a beautiful mix of game and dance. To our enjoyment, we had yet another opportunity to cooperate with amazing Gloria Benedikt, Kristztian Gergye, Hannah Kickert and Domenico Miccolis.

The OSCE stands for the Organization for Security and Co-operation in Europe. With 57 States from Europe, Central Asia, and North America, the OSCE is the world's largest regional security organization.



■ **The Forest@Risk - focused poster from Resilience Conference is now available online!**

At last! The *Navigating Conservation-Development-Disaster Complexities in Social-Ecological Systems Using Role-play Serious Gaming - a Forest@Risk* - focused poster presented at the last year's Resilience Conference in Stockholm, Sweden, has been finally published online.

The poster created by Human and Environment Linkage Program's Wei Liu, Yidan Yang, Nan Chen and our own Piotr Magnuszewski can be found online under the following [link](#).

The *Forest@Risk* is based on the *Forest Game*, which was developed as part of the international project *The Emergence of Adaptive Governance Arrangements for Tropical Forest Ecosystems* funded by National Science Foundation (USA). The application was designed to convey the complex theory behind the dilemma of common-pool resources by the means of a game. It was inspired by a 13-year research program at Sichuan Giant Panda Sanctuary World Heritage, a global hotspot region for both biodiversity and disasters (earthquake, landslide and flood) and developed within the project *Sustainable Post-earthquake Community Reconstruction* funded by Cheung Kong Philanthropic Fund (China).

