



Institutional and Resource Economics

ENS4669


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Christian Kimmich 

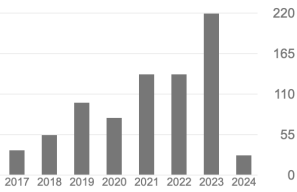
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[resource economics](#) [public economics](#) [ecology of games](#) [institutions](#) [infrastructures](#)



Zitiert von [ALLE ANZEIGEN](#)

	Alle	Seit 2019
Zitate	875	699
h-index	14	11
i10-index	16	12




Öffentlicher Zugriff [ALLE ANZEIGEN](#)

2 Artikel [nicht verfügbar](#) 11 Artikel [verfügbar](#)

Basierend auf Fördermandaten


Koautoren [BEARBEITEN](#)



Sergio Villamayor-Tomas
ICTA, Autonomous University of ...

<input type="checkbox"/> TITEL	ZITIERT VON	JAHR
<input type="checkbox"/> The water-energy-food security nexus through the lenses of the value chain and the institutional analysis and development frameworks S Villamayor-Tomas, P Grundmann, G Epstein, T Evans, C Kimmich Water Alternatives 8 (1), 735-755	165	2015
<input type="checkbox"/> Archetype analysis in sustainability research C Oberlack, D Sietz, EB Bonanomi, A De Bremond, J Dell'Angelo, ... Ecology and Society 24 (2)	145	2019
<input type="checkbox"/> Linking action situations: Coordination, conflicts, and evolution in electricity provision for irrigation in Andhra Pradesh, India C Kimmich Ecological Economics 90, 150-158	86	2013
<input type="checkbox"/> Design and quality criteria for archetype analysis K Eisenack, S Villamayor-Tomas, G Epstein, C Kimmich, N Magliocca, ... Ecology and Society 24 (3)	75	2019
<input type="checkbox"/> Modelling the renewable transition: Scenarios and pathways for a decarbonized future using pymedeas, a new open-source energy systems model J Solé, R Samsó, E García-Ladona, A García-Olivares, J Ballabrera-Poy, ... Renewable and sustainable energy reviews 132, 110105	48	2020
<input type="checkbox"/> Assessing action situation networks: a configurational perspective on water and energy governance in irrigation systems C Kimmich, SV Tomas Water Economics and Policy 5 (01), 1850005	41	2019

2



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Home > Energy, Environment, and Sustainable Economic Structures


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 European Governance, Public Finance and Labor Markets
 Health Economics and Health Policy
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 Energy, Environment, and Sustainable Economic Structures
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 Projects

Energy, Environment, and Sustainable Economic Structures

Climate change has serious ecological, social, and economic impacts. Meeting global and national targets to limit global warming can only succeed with sustainable structures in all sectors of the economy. This applies to agriculture, industry, transport, and buildings, among other things. Here, both the private sector, i.e., companies and households, and the government are called upon. In general, the government sets the framework, for example by an ecological design of the tax system or via market interventions to correct market failures, for example by assigning a price to environmental use or pollution.


The government's options for action may involve public infrastructure to enable sustainable mobility and a renewable energy supply or ensuring the availability of critical raw materials. It can also mean accelerating the diffusion of energy and environmental innovations to make companies at the same time more climate-friendly and competitive. A particularly important aspect here is making households and companies resilient to shocks. This applies to climate- and environment-related events such as floods, heat waves or droughts, but also to economic developments such as disruptions to critical infrastructure, as well as social inequalities and demographic change. Evidence-based and strategically coherent policy measures are becoming increasingly important to establish sustainable structures.

Head of Research Group



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3



➤ Institutions as “rules of the game” (Douglas North)

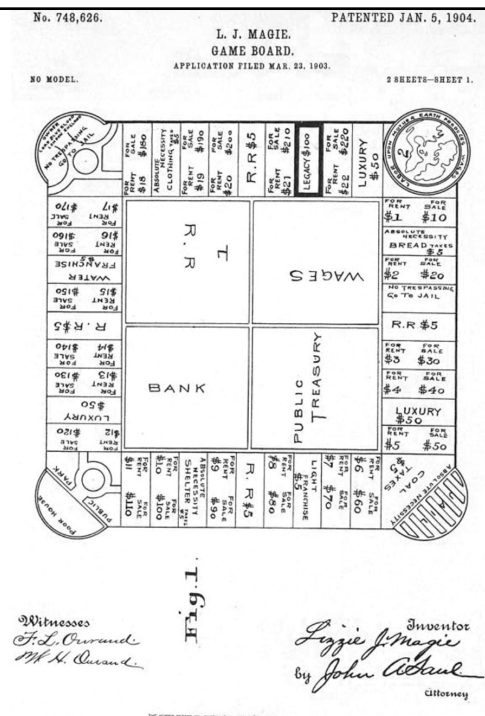
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“The real problem of humanity is the following:
we have Palaeolithic emotions; **medieval institutions**; and god-
like technology”
(sociobiologist E.O. Wilson, interview in 2009)

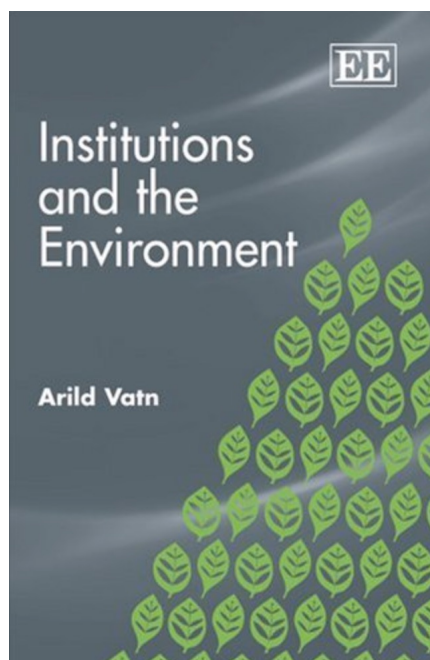
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➤ The Landlord's Game - Henry George



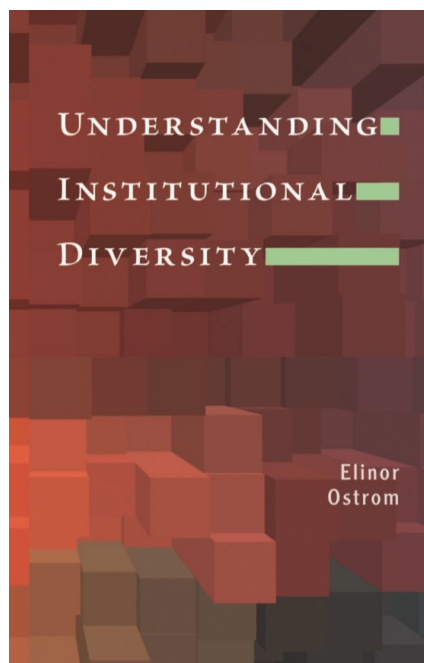
6



Contents

<i>Preface</i>	ix
<i>Acknowledgements</i>	x
<i>Further acknowledgements</i>	xii
<i>List of abbreviations</i>	xiii
1 Institutions: the web of human life	1
1.1 Theories about choice	2
1.2 Observing institutions	6
1.3 Defining institutions	9
1.4 Institutions, the economy and the environment	14
1.5 The structure of the book	19
PART I UNDERSTANDING INSTITUTIONS	
2 Institutions: the individual and the society	25
2.1 The problem of social order	26
2.2 The theory of social construction	29
2.3 The individualist perspective	39
2.4 How to explain social phenomena	45
2.5 Summary	56
3 Institutions: coordination and conflict	60
3.1 Categorizing institutions	60
3.2 A 'grammar' of institutions	67
3.3 Interests and institutions	68
3.4 The protection of rights	78
3.5 Coercion, freedom and institutions	80
3.6 Summary	83
4 Institutional economics: different positions	86
4.1 The new institutional economics	88
4.2 The 'institutions-as-equilibria' position	94
4.3 The classical tradition of institutional economics	97
4.4 Perspectives on the state and public policy	103
4.5 Summary	106

7



Contents

<i>List of Illustrations</i>	xi
<i>Acknowledgments</i>	xiii
PART I: AN OVERVIEW OF THE INSTITUTIONAL ANALYSIS AND DEVELOPMENT (IAD) FRAMEWORK	1
One	
Understanding the Diversity of Structured Human Interactions	3
<i>Diversity: A Core Problem in Understanding Institutions</i>	4
<i>Is There an Underlying Set of Universal Building Blocks?</i>	5
<i>Holons: Nested Part-Whole Units of Analysis</i>	11
<i>Action Arenas as Focal Units of Analysis</i>	13
<i>Zooming Out to an Overview of the IAD Framework</i>	15
<i>Viewing Action Arenas as Dependent Variables</i>	16
<i>Institutional Frameworks, Theories, and Models</i>	27
<i>The Limited Frame of This Book</i>	29
Two	
Zooming In and Linking Action Situations	32
<i>An Action Situation as a Focal Unit of Analysis</i>	32
<i>Example of a Simple Action Situation</i>	35
<i>The Basic Working Parts of Action Situations</i>	37
<i>Linking Action Arenas</i>	55
<i>Predicting Outcomes</i>	64
<i>Evaluating Outcomes</i>	66
Three	
Studying Action Situations in the Lab	69
<i>The Trust Game in the Experimental Laboratory</i>	70
<i>A Commons Dilemma in the Experimental Laboratory</i>	78
<i>Structural Changes in the Laboratory</i>	85
<i>Replications and Extensions of Commons Dilemma Experiments</i>	93
<i>Conclusions</i>	97
Four	
Animating Institutional Analysis	99
<i>Animating Open, Competitive Processes</i>	100

8



Elinor Ostrom received the 2009 Nobel Memorial Prize in Economic Sciences

"for her analysis of economic governance, especially the commons"

She entitled her Nobel Address

"The Polycentric Governance of Complex Economic Systems"

Available here:

<https://www.youtube.com/watch?v=T6OgRki5SgM>

9

9



A short introduction to her work:

<https://vimeo.com/121608252>

A full-length documentary:

<https://polisci.indiana.edu/news-events/news/2020-ostrom-documentary-barbara-allen.html>

10

10

PRESS RELEASE

14 October 2024

The Prize in Economic Sciences 2024

The Royal Swedish Academy of Sciences has decided to award the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2024 to

Daron Acemoglu

Massachusetts Institute of Technology, Cambridge, USA

Simon Johnson

Massachusetts Institute of Technology, Cambridge, USA

James A. Robinson


University of Chicago, IL, USA

“for studies of how institutions are formed and affect prosperity”

They have helped us understand differences in prosperity between nations

This year’s laureates in the economic sciences – Daron Acemoglu, Simon Johnson and James Robinson – have demonstrated the importance of societal institutions for a country’s prosperity. Societies with a poor rule of law and institutions that exploit the population do not generate growth or change for the better. The laureates’ research helps us understand why.

11



R. QUENTIN GRAFTON,
WIKTOR ADAMOWICZ, DIANE DUPONT,
HARRY NELSON, ROBERT J. HILL,
AND STEVEN RENZETTI

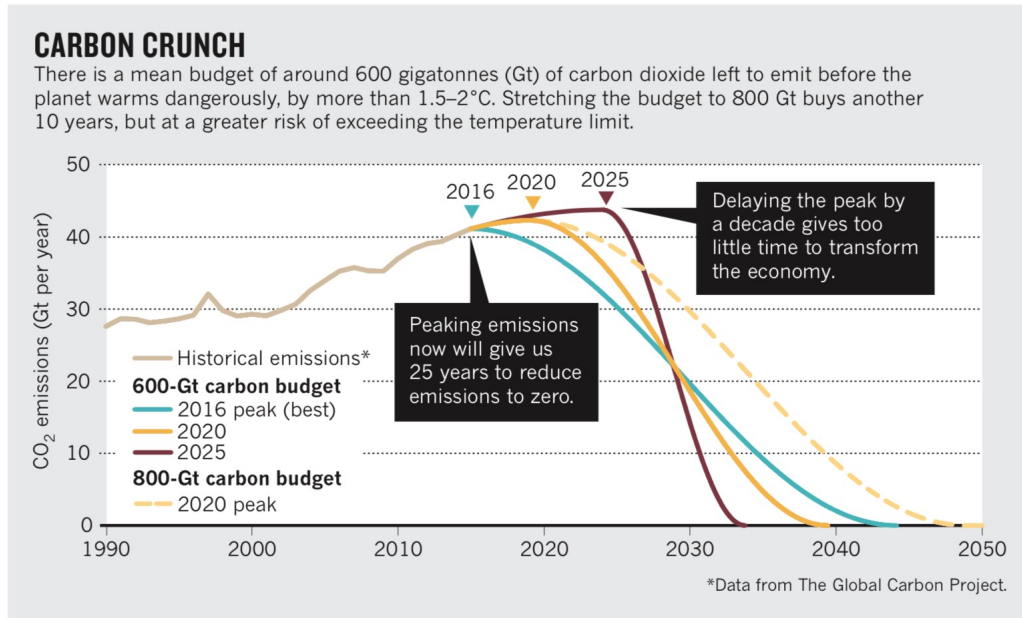
THE

ECONOMICS OF
THE ENVIRONMENT
AND NATURAL
RESOURCES

CONTENTS

<i>List of Figures</i>	ix
<i>List of Tables</i>	xii
<i>List of Boxes</i>	xiii
<i>Preface</i>	xv
<i>Acknowledgements</i>	xvi
<i>Introduction</i>	1
 Part I Economics of the Environment	 5
1 Models, Systems, and Dynamics	7
2 Property Rights	36
3 Economics of Pollution Control	61
 Part II Resource Economics	 93
4 Bioeconomics of Fisheries	95
5 Forestry Economics	129
6 Water Economics	161
7 Economics of Non-renewable Resources	193
 Part III Environmental Valuation	 219
8 Environmental Valuation: Introduction and Theory	221
9 Environmental Valuation: Stated Preference Methods	249
10 Environmental Values Expressed Through Market Behavior	277
 Part IV Global Environment	 313
11 Growth and the Environment	315
12 Environmental Accounting	344

12



13

Timeline

Date		
21.2.	Course introduction / Institutions	
28.2.	Institutions II / Introduction to Claudio Cattaneo	
7.3.	Classical Institutionalism and New Institutional Economics, Property rights and resource regimes, Commons	
14.3.	New Political Economy, Public Choice, Evolutionary Economics	
21.3.	Ecological Resource Economics	
28.3.	Applications: water, forests, fisheries Case study: The Water–Energy–Food Nexus in India	
4.4.	Doughnut Economics: From Planetary Boundaries to thinking how an economy can be regenerative by design (Claudio Cattaneo)	
11.4.	Application of the doughnut at the city scale - Barcelona as an example (Claudio Cattaneo)	
18.4.	[Easter – Great Friday]	
25.4.	Paper discussions; Case study II: Forestry Q&A, discussion of your assignments	
2.5.	Reading week	
9.5.	Block postponed to 16.5.	
16.5.	Presentations and Debate, Open Space, Experiment (4 hrs)	

14

Course requirements

1. **Paper reading and discussion** (10min): 10%
Deadline: 25.4.
2. **Term paper draft** (2000-2500 words): 30%
Deadline: 9.5. (end of reading week)
3. **Presentation & oral exam** (15min & 15min): 50%
(15min discussion based on paper & presentation)
Deadline: 16.5. (upload to your MUNI folder or USB)
4. **Term paper final**: 10%
Deadline: 15.6.

15

15

Outline: Institutions

1. Introduction. Basic concepts, course outline, relevance, and applications.
2. Institutions: The individual, the society, and the environment. Definitions and language. Formal and informal rules, rules in-use versus rules in-form, conventions, strategies, motivation, interests, rationality, heuristics, norms, and values. Sociological, economic and political perspectives.
3. Institutions: Coordination and conflict, power, institutional stability, change and evolution. Institutional diversity and pluralism.
4. Classical and New Institutional Economics: different positions, values, and world views. Actor-centred institutionalism and situationism.
5. Property rights and typologies of resource regimes and governance: Private, Club, Common, Open Access, and Public Goods. Governance structures and externalities versus transactions.
6. The Institutional Analysis and Development framework and the Ostrom school of political theory and policy analysis.

16

Outline: Resources

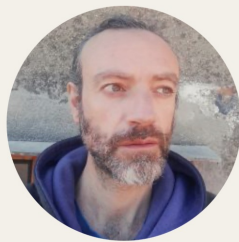
8. Resource Economics: The use and limitations of models. Stocks, flows, and funds. Exponential and logistic growth, Gordon-Schaefer models. Renewable and non-renewable resources: water, energy, land and climate change in agriculture, forestry, and fisheries.

9. Ecological Resource Economics: towards an intuition of complex system dynamics. Lotka-Volterra models, steady states, stability, tipping points, thresholds, leverage points, resilience and collapse.

10. Applications and methods of Institutional and Resource Economics: Selected cases on exploitation, degradation, erosion, and conservation in agriculture, forestry, and fisheries. Methodological reflection and interactive debate.

11. Towards Social-Ecological Systems and Sustainability Transformations.

17



**ESEE Vice-President:
Claudio Cattaneo**

Professor of Ecological Economics
ICTA-UAB & Masaryk University, Spain
Founding member of the Research and Degrowth association
Claudio.Cattaneo[at]uab.cat

Claudio Cattaneo –PhD Ecological Economics
Doughnut Economics Consultant, Barcelona

March 8th – Intro to Kate Raworth “[Doughnut Economics- 7 ways to think as a XXIst century economist](#)”

March 15th – The Doughnut Economics Action Lab. [An application of doughnut economics](#) – The case of cities

March 22nd – The Barcelona council’s early [process towards doughnut economics](#).

18

March 8th: short summary of K.Raworth's book, with her 7 ways to revert neoclassical economics



Seven ways to think like a 21st century economist

Seven Ways to Think:	From 20th-Century Economics	To 21st-Century Economics
1. Change the Goal	GDP	the Doughnut
2. See the Big Picture	self-contained market	embedded economy
3. Nurture Human Nature	rational economic man	social adaptable humans
4. Get Savvy with Systems	mechanical equilibrium	dynamic complexity
5. Design to Distribute	growth will even it up again	distributive by design
6. Create to Regenerate	growth will clean it up again	regenerative by design
7. Be Agnostic about Growth	growth addicted	growth agnostic

April 2011 | Doughnut Economics Action Lab | For licensing visit doughnuteconomics.org/license

19

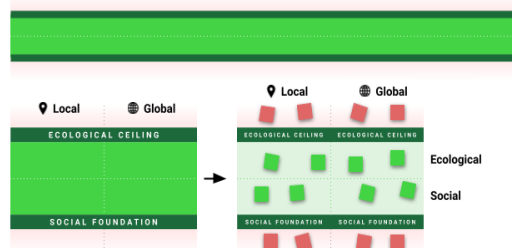
March 15th: what if we wanted to apply Donut Economics to a city?
Unrolling the Donut and five tools to work on it

How can this place help bring humanity into the Doughnut?

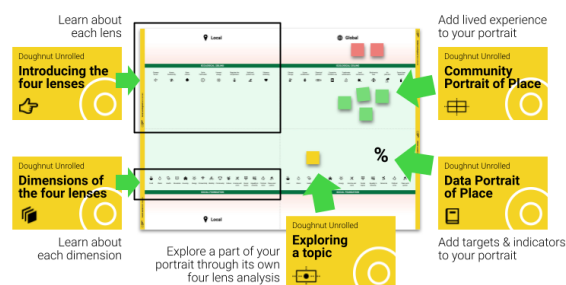


If we unroll it...

We can create a space for exploring possible futures we want, through four lenses

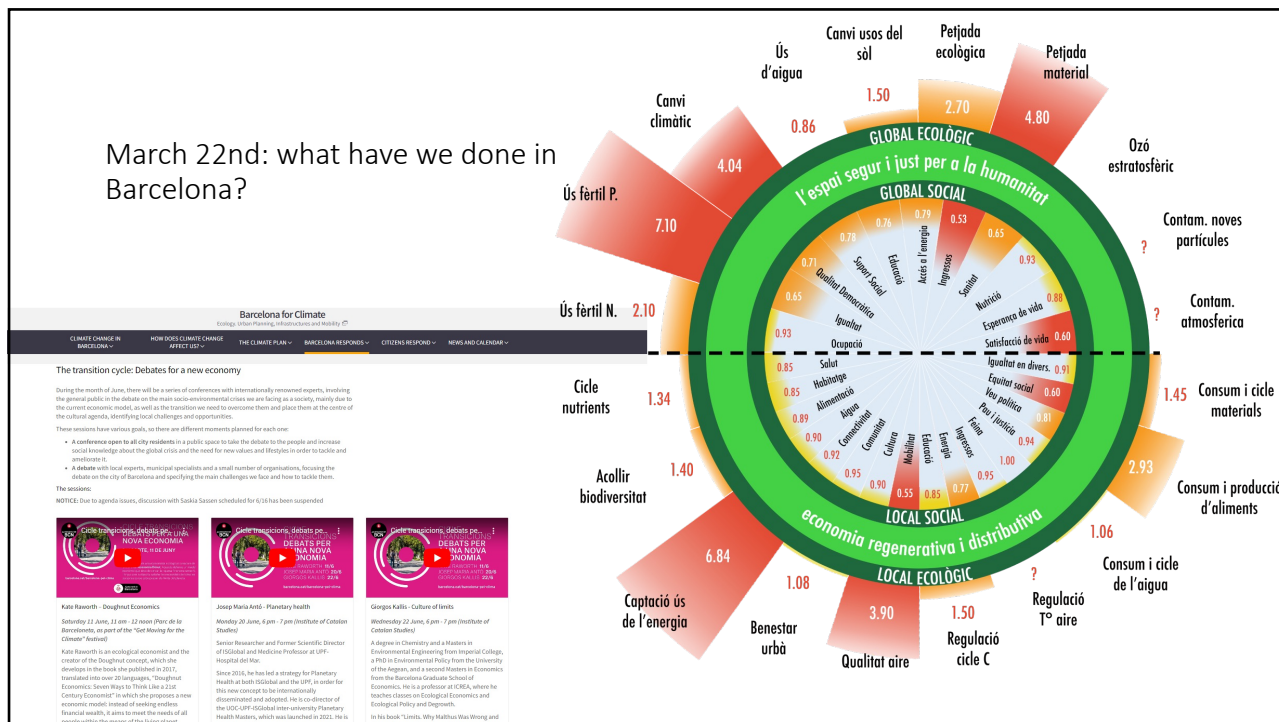


How the tools work together



Derived from DEAL
doughnuteconomics.org

20



21

Your background?

Environmental Studies, International Relations, other?

Your interests?

22

Learning enthusiastically

A conversation with Prof. Dr. Gerald Hüther*

How do people learn?

Generally speaking, we think “learning” means cognitive, formal learning. We tend to associate “learning”

with a specific learning process in a modern, organized society. Picture yourself how you felt as a small child when, after trying many times, you eventually managed to haul yourself up by the

You mention the “power of inner images” in your publications. What are inner images?

As a biologist I am naturally excited

Thesis topics

<https://enviro.fss.muni.cz/bc/zaverecne-prace>

Ing. Zbyněk Ulčák, Ph.D.



Mgr. Péter Szabó, Ph.D.



Christian Kimmich, Ph.D., M.Sc.



1) Organizing food/textiles/wood provision sustainably: How are local or global food/textiles/wood value chains structured and organized? How are sustainable value chains organized differently? Which difference can organization make in production behavior? Can global value chains be sustainable? Can they be resilient? A related thesis topic and research question should focus on one specific natural resource and related value chain within an empirical case study. A related thesis could use theories and qualitative or quantitative methods from political economy and ecology, qualitative game theory, or actor-centered network and institutional analysis, among others.

2) Water and energy in agricultural systems: How energy- and irrigation-dependent are agricultural systems? How can organic or permaculture differ with respect to energy and water input and related organization? Which difference can renewable energies make? A thesis related to this topic could cover selected climate-specific agricultural systems from Europe or Asia and related governance structures for the provisioning of natural resources for food production. The thesis could use theories and methods from political economy and ecology, game theory, network and institutional analysis.

3) Understanding cooperative governance and public goods provisioning: What characterizes entrepreneurship and collective action in the context of eco-social co-operatives? How does cooperative entrepreneurship differ from other forms? Which role do co-operatives play in public utilities? This thesis should contain an empirical part that could focus on recently founded co-operatives, for example. The thesis could employ any suitable theory and qualitative or quantitative empirical method, including qualitative comparative analysis.

Thesis topics

<https://enviro.fss.muni.cz/bc/zaverecne-prace>

4) Board games, complex experiments, and ecological economics: Who were the inventors of the board game Monopoly? Which ideas were behind this invention? Which role could board games and experiments play in social-ecological transformations? As an MA thesis, this topic could include an experiment, or an empirical study about perceptions of the game narratives and related beliefs, or related questions concerning games in society, economics, and the environment.

5) Drivers and constraints of climate and energy policies: Which factors support or constrain the renewable energy expansion and energy transition that is so urgently needed for climate mitigation? Which role does the labor market play? This thesis could build on theories from ecological economics and conduct an input-output analysis for a selected country.



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25

25

<https://enviro.fss.muni.cz/bc/zaverecne-prace>



Home The Project Network Members Network Resources Research Diaries News Events

CT CONNECTIVITY TIMES
No. 2, 2021 July - November '21

A hybrid network event
Three great abstract designs that connect headless - the programme

And one in-person
Networks in context at the Earth Stage

Interview with Prof. Yamil Moreno

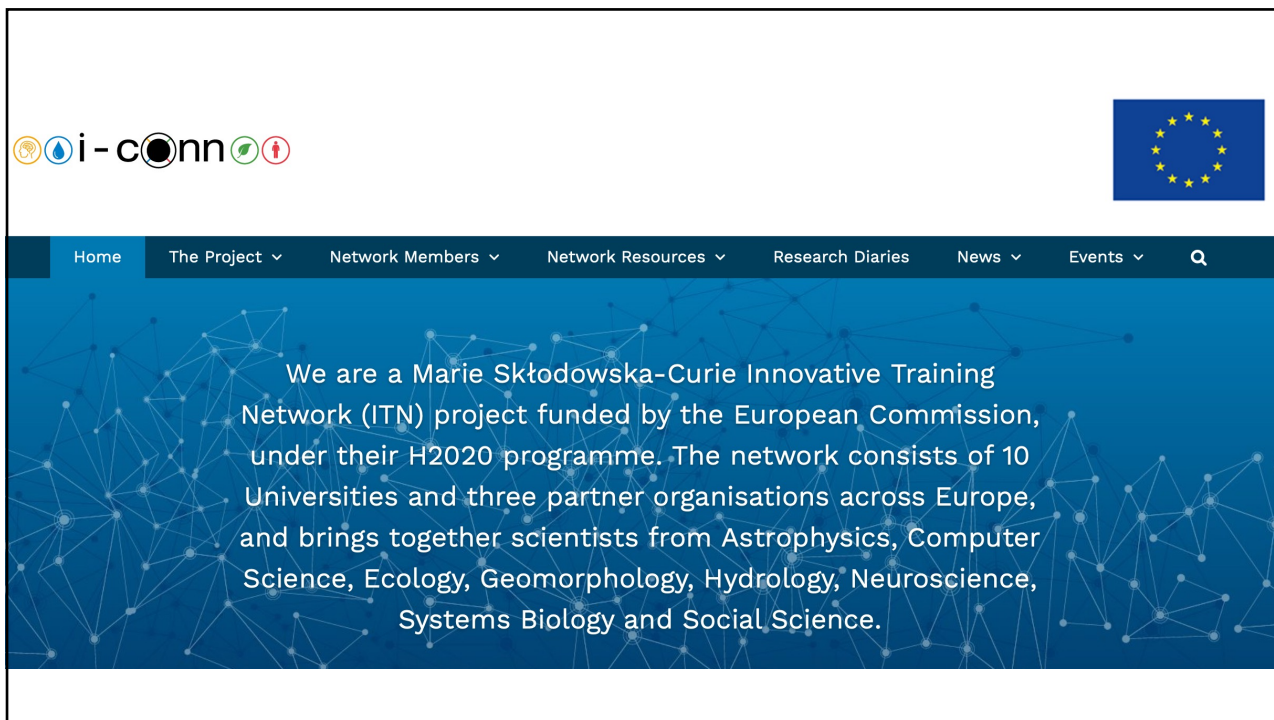
A first publication

A Tale of Two Cities

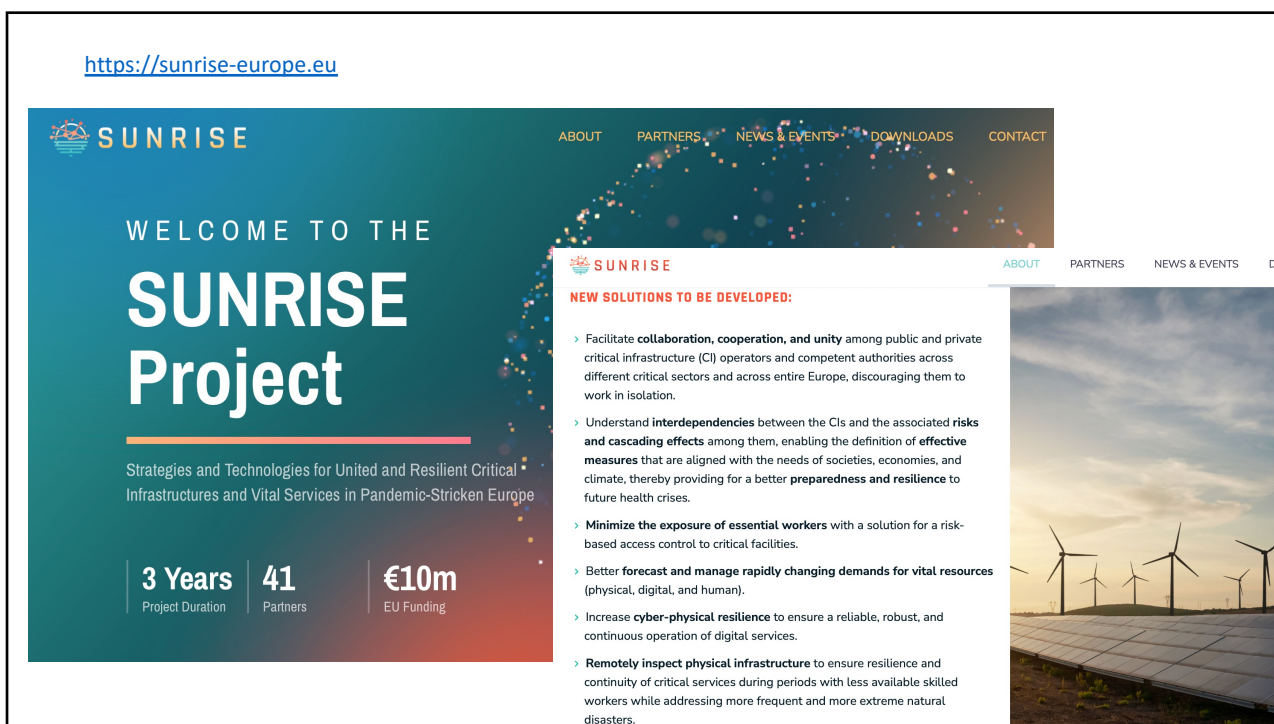
The Datathon

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26



27



28

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