

# Grand Challenge Accepted

## Schedule August 24th 2023

9:30 Walk in at Wijnhaven

**10.00** | **Welcome and Keynote** | **3.46**  
**11.00** | Warm welcome by Haiko van der Voort and keynote by Irakli Beridze

Coffee

**11.30** | **Presentations EPA Graduates** | **3.46 & 3.60**  
**12.30** | Moderated by Floortje d'Hont and Steffen Steinert

**12.30** | **Lunch with Alumni** | **Fifth Floor**  
**13.45** | Alumni will share about their life after EPA

**13.45** | **Workshops** | **3.46 & Common Room**  
**14.45** |

- UN SDG Storytelling Game
- EPA Pubquiz

**14.45** | **Presentations EPA Graduates** | **3.46 & 3.60**  
**15.45** | Moderated by Özge Okur and Jill Slinger

Coffee

**16.15** | **Launch of EPA Graduates** | **Spanish Stairs**  
**17.15** |

- Goodbye by Aukje Hassoldt, dean of TPM
- Word of thanks by Haiko van der Voort
- EPA stories from graduates
- The famous picture

Travel to Scheveningen

**18.00** | **Beach Party** | **Beach Club Culpepper**  
**Late** | Closure of the day at the beach of Scheveningen

# A word of welcome



## Haiko van der Voort

*Director of EPA*

Grand Challenge Accepted is a busy day. We are saying “Goodbye” to a cohort of EPA graduates. We are meeting people we once said “Goodbye” to and want to stick around once in a while. We are saying “Hi” to people who are amidst EPA life. And we say “Welcome” to new EPA students that may still be wondering what they have chosen (really, I would not have known that either exactly before the start of the program).

This booklet gives you all information you need to celebrate EPA with us. Still, what is information? To make the day really unforgettable we need our human intelligence to bend reality a little bit. In fact, to my impression, EPA people are very good in this.

For instance, EPA is good in wording. For the people not used to our vocabulary, you can find some hints here:

- If you feel chaos, it is dynamics
- If you feel things get stuck, it is complexity
- If you are feel ill-informed, it is uncertainty
- If you feel someone is talking nonsense, the problem is wicked.

With this attitude, I am confident that we will have an enjoyable day. And if you are realizing that you are in fact enjoying yourself very much, consider joining us at the beach party in the evening. One of the organizer can help you with tickets.

Let’s just enjoy this annual EPA party.

# Keynote



## Irakli Beridze

*Head of the Centre for Artificial Intelligence and Robotics, United Nations, UNICRI*

AI Governance of as one of the biggest challenges of our times - Case Study: Responsible Use of AI in Law Enforcement

10.00-11.00

📍 3.46

As we collect greater amounts of data, develop sophisticated algorithms and achieve unprecedented computational power, the adoption of AI systems keeps accelerating exponentially. This favourable environment for AI adoption led to its rapid integration into various aspects of our lives and industries. However, while AI has substantial potential, challenges such as ethical considerations, data privacy, and potential biases must be carefully managed to ensure its benefits outweigh the risks.

The introduction of AI in law enforcement and its governance remains one of the biggest challenges in this field and presents a compelling case study. AI systems are increasingly necessary devices in law enforcement, expediting and automating various processes within agencies and allowing officers more time and resources to focus on complex cases and community engagement. Yet, the critical role that law enforcement plays in shaping society underscores the need for a responsible approach. To avoid potential pitfalls and ensure just and efficient criminal justice systems, law enforcement agencies need to engage with AI in a way that is lawful, minimizes harm, respects human autonomy, is fair, and is supported by good governance. By adhering to these principles, they can take advantage of AI's transformative role in enhancing the effectiveness and fairness of law enforcement while respecting individual rights and upholding societal values. The question at hand is how to reconcile the need for innovation with the imperative for robust safeguards in the complex realm of law enforcement.

### **Bio:**

More than 20 years of experience in leading multilateral negotiations, developing stakeholder engagement programmes with governments, UN agencies, international organisations, private industry and corporations, civil society, academia, and other partners on an international level. Irakli Beridze is advising governments and international organizations on numerous issues related to international security, scientific and technological developments, emerging technologies, innovation and disruptive potential of new technologies, particularly on the issue on crime prevention, criminal justice and security.

Since 2014, Initiated and managed the first United Nations Programmes on AI. Initiating and organizing number of high-level events at the United Nations General Assembly, and other international organizations. He has numerous publications in international journals and magazines and frequently quoted in media on the issues related to AI. Irakli Beridze is an International Gender Champion supporting the IGC Panel Parity Pledge. He is also recipient of recognition on the awarding of the Nobel Peace Prize to the OPCW in 2013.



## Matvei Isaeko

Exploring the role of networks in CPR governance

11.30-12.30

📍 3.46

My work is contributing to the solution of the problem that is inherent to many types of valuable resources on our planet: the tragedy of the commons. These common pool resources (CPR) are often accessible for many actors and are depleting due to the appropriators that follow the strategy of rapid extraction. At the same time these appropriators interact with each other through their social connections and in some conditions produce institutions (rules) that define the way the resource should be appropriated allowing for a sustainable development of the community and preventing the resource from depleting.

In my thesis I am exploring the role of different social networks of appropriators in the emergence of institutions for CPR governance. I took fish as an example of a CPR and model community of fishermen through agent-based modeling (ABM). Using ABM in combination with techniques from social networks analysis I hope to gain some insights for policymakers on how are different social structures connected with the institutions they produce.



## Gerdus van der Laarse

Towards climate just nature-based solutions: A social vulnerability framework for mapping ecosystem service demand

11.30-12.30

📍 3.46

Nature-based solutions (NbS) are increasingly being used around the globe as a climate action tool. In the Global South, which faces significant climate risks, higher urbanisation rates emphasise the importance of climate justice. While social valuations and interactions with nature-based solutions have been well researched, the relationships between nature-based solutions and social vulnerability to climate change remain difficult to capture.

Furthermore, there exist little support for decision-makers to integrate social vulnerability into NbS planning. In this thesis, a social vulnerability framework to determine ecosystem service demand is presented using principal component analysis (PCA), and used with an NbS matching model to determine the types and locations of NbS to be prioritised, applied to a case study of Cape Town, South Africa.

The presented framework allows for leveraging openly available quantitative data sets and incorporating different risk factors, while depending on expert interviews to contextualise the model and emphasize its limitations. Using this method of prioritisation and selection, decision-makers of the city of Cape Town can incorporate climate justice into its urban planning for NbS, while taking consideration of the framework limitations and restrictions.



## Dorukhan Yeşilli

Operational Resilience: Backup Strategies for Crisis Management in the Age of Ransomware

11.30-12.30

📍 3.46

Increasing digitalization of systems bring about the grand challenge of keeping these systems secure from malicious prying eyes, and thus highlighting the need for increased Cybersecurity practices. Ransomware is among the most prevalent cybersecurity threats in our current digital era. Ransomware albeit being very similar to a typical malicious software shows itself during the impact phase. In this phase, ransomware encrypt data using advanced cryptographic measures and lock users out of their systems to ask for a ransom that is typically paid through bitcoins. ATPs also exfiltrate sensitive data and utilize double and triple extortion methods where they either blackmail the organization with the public release or selling of their data to convince the organization to paying the ransom. Defense against Ransomware is possible, however, in many cases by the time that ransomware is detected they already have strong access into the systems and data. Organizations can bring back their systems and data should there be strong backup & recovery practices. This thesis systematically explores the ransomware topic to identify how ransomware attack backups, what are the best practices for backups & recovery, and the corresponding challenges for organizations to produce strong policy recommendations.



## Alexandre Curley

Policy platforms as support tools for climate change mitigation and adaptation policymaking

11.30-12.30

📍 3.60

In recent years, there has been a notable rise in the proliferation of web-based support tools aimed at addressing climate-change mitigation and adaptation (CCMA) challenges, given their ability to facilitate the access, exploration and sharing of climate-related knowledge. Various terms are frequently employed to refer to these tools, including decision support tools, decision support systems, climate change scenario services, climate change visualisation tools, climate change decision aids, climate data platforms, among many others. However, an important knowledge gap refers to how policymakers themselves perceive such tools that are constantly being developed to support them to deliver more evidence-based policies. To address this, this thesis examines support tools within the common terminology of Policy Platforms, focusing on the exploration of the following research questions: (i) What are the typical characteristics of climate-change mitigation and adaptation (CCMA) policy platforms? (ii) How do existing examples of CCMA policy platforms compare against these characteristics? (iii) How do policymakers perceive the usefulness of CCMA policy platforms and what characteristics do they look for in such platforms? Based on the results of the questions above, this thesis aims to answer the main research question (MRQ) of what recommendations can be made for the design and use of CCMA policy platforms in order to improve their usefulness as support tools for policymakers and policy advisors?



## Auriane Tecourt

Introducing Equity in Transport Planning:  
Focus on the Planning of Bicycle Lanes in  
the Grand Paris Metropolis

11.30-12.30

📍 3.60

This research examines the synergy between reducing greenhouse gas emissions and addressing urban inequalities through the strategic implementation of bike lanes. While Sustainable Development garners attention, the intricate balance between its environmental and social pillars remains underexplored. We analyze how bike lane placement can mitigate transport-related disparities while promoting eco-friendly practices, using Paris as a case-study. We hope to uncover trade-offs that can be navigated to achieve both goals. By delving into the nexus of environmental and societal objectives, this satisfactorily, contributing to a more holistic approach in fostering sustainable urban landscapes.



## Farley Rimon

Exploring distributive justice in water resource  
allocation: A rival framings approach on the  
operationalization of equality in multi-objective  
optimization models for shared water systems

11.30-12.30

📍 3.60

With growing stress for the multi-faceted use of limited water supply, one of the biggest challenges facing policymakers is how they can efficiently and equitably distribute water from existing reservoirs to ensure sustainable water use. Multi-Objective Optimization (MOO) models are vital for addressing complex water system challenges with limited resources. However, varying approaches to distributive justice in these models introduce normative bias, leading to uncertainty in the derived implications from the model.

This thesis is the first approach to understanding how the operationalization of distributive justice shapes the implications drawn from the 'optimal' outcomes of decision-support MOO-models. A rival framings approach acknowledges diversity in perspectives, for which it is suitable to contrast the operationalization formulation of the same distributive justice principle. The rival framing focused on the inequality metric and the aggregation method over time for this metric, both used for the formulation of inequality in the objective formulation.

# Lunch with alumni

12.30-13.45

📍 5th floor



## Violetta Matzoros

*Smart Freight Centre*

I am a proud EPA alumni and have graduated back in 2019. I have worked in different analyst positions to inform decision making with data insights till I decided to leave my corporate position and look for a job with bigger impact. Currently, I lead the Digitalization program in a NGO specializing in the reduction of emissions from multimodal freight transport.



## Mels van Gameraen

*Capgemini*

Hello, My name is Mels and in 2022 I graduated from EPA, where I took the Simulation and Gaming specialization. As part of my thesis, I did an internship at a hydrogen production company, where I worked on simulation models of hydrogen production. Although I really enjoyed this position, I realized I wanted to explore other industries as well, which led me to consultancy. Currently, I work as a management consultant at an IT company and am mainly involved in data-analysis and modeling related projects.



## Ettore Arpini

*World Resource Institute*

Ettore graduated EPA cum laude in 2022, taking the Economics and Finance specialization. and has since become the Global Data Systems and Institutional Reporting Manager at the World Resources Institute. EPA also helped him recognize important regulatory and policy shifts in Brazil, prompting him to found Drexly, a startup building low-code infrastructure for local small and medium-sized businesses to adhere to Brazil's Central Bank Digital Currency without needing an in-house blockchain and smart contracts team.

# Workshops



## UN SDG Storytelling Game

Connor McCullan

13.45-14.45

📍 Fifth Floor

What might a sustainable future look like? We all have an important part to play when it comes to exploring the future of a sustainable planet, yes, even you! By inviting everyone to share their vision of a better future, we can collectively begin to grow a more inclusive version of our best tomorrow. In this workshop, we will play with this idea using a SDG storytelling game, exploring the role of science fiction in policy making and practice collective sense-making.



## EPA Pubquiz

Haiko van der Voort

13.45-14.45

📍 3.46

This is the definitive EPA pubquiz (in progress). You will answer questions about the history of EPA, EPA life, Alpacas and more. As any good pubquiz: it is way too difficult, ambiguous and unfair. Note: this quiz has already been organized for alumni in February this year. If you have attended that one already, it is even unfairer to attend (although we doubt you would do it better than half a year ago).





## Yaren Aslan

Understanding the Relationship between Lock Complex Effectiveness and System Performance: A Study of the Volkerak Complex

14.45-15.45

📍 3.46

Inland Waterway Transport (IWT) is an untapped resource that can be mobilised to achieve a more sustainable transport system without compromising competitiveness. Waterway locks are ageing assets in IWT systems and are infamous for creating bottlenecks. This study addresses the following research question: How can the effectiveness of waterway locks be assessed to support lock maintenance and operation? Simulation modelling, offering an efficient and low-risk evaluation of policy options while incorporating the intrinsic variability of the system, is selected as the core methodology. The simulation model incorporates operational aspects of the system, malfunctions, corrective maintenance activities, and the calculation of various performance indicators selected from an extensive list compiled through literature research. These indicators include the occupancy of the infrastructure, the waiting times experienced by the vessels, the costs, and emissions incurred in the system. In addition to existing indicators, three formulations are proposed for Overall Equipment Effectiveness (OEE) in lock complexes. Applicability of the selected methodology is demonstrated by employing a case study of the Volkerak complex, one of the largest and busiest lock complexes in Europe. Qualitative and quantitative data are collected through operational logs, interviews with experts and stakeholders, site visits, and literature research. Findings highlight the trade-off between indicators related to service level and occupancy in lock complexes, influenced by traffic volumes and locking regimes.



## Zeeshan Jamadar

Exploring consensus to develop global standards in response to Sea Level Rise (SLR)

14.45-15.45

📍 3.46

Sea level rise (SLR) poses a significant threat to coastal areas, making it one of the most consequential impacts of climate change. Despite efforts to implement strict climate measures, SLR remains unavoidable. Adapting to SLR is the most viable option, but challenges stand in the way:

1. Inconsistent terminology for adaptation measures creates confusion.
2. Lack of coordination among stakeholders hinders progress.
3. The unavailability of accurate information and outdated methods slow down solutions.

To overcome these hurdles, the development of global standards for SLR adaptation is essential. However, such standards are yet to be established.

I conducted an exploratory study using desk research and the Delphi method, engaging an expert panel. The findings are insightful and can pave the way for globally standardized SLR adaptation measures.

Curious about the results? Join me for a short presentation on my thesis. See you there!



## Nicolò Canal

14.45-15.45

📍 3.60

Connecting past and future: A macroeconomic analysis of hysteresis for Italy

For most of us, knowing that past actions influence the future is part of our daily experience and does not need scientific proof. But, in the field of macroeconomics, this same idea has been the subject of particularly animated debates and (intellectual) brawls.

More specifically, so-called mainstream economists hold that only changes in supply-side factors can long-term impact a country's macroeconomic performance. Demand-side factors, on the other hand, are confined to the short-run, mostly being responsible for an economy's fluctuations around a supply-determined path. Following this reasoning, austerity measures, such as monetary tightening policies currently in place, would succeed in taming demand-driven economic cycles without hampering a country's long-run macroeconomic performance. Despite the appealing looks of such understanding, the long-lasting scarring effects induced by the 2008 financial crisis have cast profound doubts on this narrative. So, what if we reintroduce hysteresis (i.e. demand-side forces having long-run effects) to evaluate the macroeconomic impact of austerity measures? To answer this huge enigma many other questions will follow: which hysteresis mechanisms exist? How do they operate? How can we capture them empirically?

This thesis presentation will give you a broad overview of all these points, particularly focusing on the Italian economy as a practical case study.



## Folkert Post

14.45-15.45

📍 3.60

Modelling the Dutch Imbalance Market: A study of the 2030 landscape and developments

Since the late 1990s a lot has changed on the electricity market in both the Netherlands and in Europe. During this time, markets got liberalized and renewable energy has become a growing part of the electricity network. These changes have effected how electricity grids are balanced and kept reliable. This study focusses on the developments the imbalance market and how to model them in order to gain a broad overview of market and its stakeholders in 2030.



## Manjula Subramanian

14.45-15.45

📍 3.60

Comparative Analysis of Green Hydrogen Policy Mixes of the EU and the US

Falling under the umbrella grand challenge of climate change, this thesis focuses on an emerging technology of green hydrogen to support sustainable energy transition. Green hydrogen is considered as a versatile energy carrier to support transitioning of industries, energy systems and transport, towards sustainability. It is a subject of growing interest in politics, industry, and academia over the last couple of years. Using a case study approach, the thesis reviews the policy mixes of two regions - EU and US - with respect to green hydrogen and performs an analysis of the two regions individually using the policy mixes framework. The policy mixes framework is an analytical framework to evaluate policy mixes for a unit(s) in the field of sustainable energy transition. It is concerned with analyzing how multiple and complex policies can coexist and must be studied or evaluated. The framework consists of three building blocks - first: elements which comprises policy strategies, instruments and their interaction, second: policy processes and finally: characteristics: consistency, coherence, credibility and comprehensiveness. To determine the effectiveness of the policy toolbox (instruments and processes) for a technological change, an evaluation of the characteristics of the policy mix across the spectrum of consistency (of elements), coherence (of processes), credibility (of the policy mix), and comprehensiveness (of the policy mix) is performed for each of the regions.

Following the individual analysis, the paper performs a comparative analysis of the two regions to understand similarities and differences and further provide policy recommendations to improve the individual regions' policy mixes.

Grand  
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# Launch of EPA Graduates

16.15-17.15

📍 Spanish Stairs

The traditional send-off starts with a goodbye from our Dean Aukje Hassoldt. Haiko van der Voort will thank everybody that he noticed contributing to the EPA community. Furthermore two EPA graduates will give a personal reflection on EPA and EPA life. This together will make all graduates gloom on the professional cohort picture that will be taken right afterwards.



*EPA Grand Challenge Accepted 2022*

## Beach Party

We will have food and drinks at Culpepper on the Beach. There will be a volleyball net as well. Beware, also here pictures will be taken! Haven't registered yet? Please contact one of the organizers.

18.00-Late

📍 Culpepper Scheveningen

# A word of thanks

Without the help of many people and organisations we would not have been able to organise Grand Challenge Accepted 2023. We would like to therefore to thank: Irakli Beridze, Aukje Hassoldt, all the speakers, volunteers, alumni, workshop hosts, Dentatus, photographers, staff, and of course, all the participants.

On behalf of the Grand Challenge Accepted Committee 2023,

Haiko, Lilian, Canan, Rhys, Folkert

