



emellyneforman

IGSD ECR Sustainability Training School 2024

Reading List as Recommended by our Researchers

Helicopter Science - Participatory Ecological Monitoring

IGSD Research Fellow Dr Herizo T. Andrianandrasana writes on how Participatory Ecological Monitoring (PEM) is a conservation methodology aiming to include local communities in the collection and analysis of biodiversity and threats data in a managed conservation zone. Often implemented annually, PEM optimises local knowledge to help understand ecological change which is an essential step towards assessing the success or failure of conservation activity and improving conservation effectiveness.

231 (1 of 3)
Automatic Zoom

BRIEF REPORT
RESEARCH 231

Participatory Ecological Monitoring (PEM)

Participatory research methods for sustainability – toolkit #4

Participatory Ecological Monitoring (PEM) is a conservation methodology aiming to include local communities in the collection and analysis of biodiversity and threats data in a managed conservation zone. Often implemented annually, PEM optimises local knowledge to help understand ecological change which is an essential step towards assessing the success or failure of conservation activity and improving conservation effectiveness.

Herizo T. Andrianandrasana , Jessica Savage , Anselme Toto Volahy, Peter R. Long , Nikoleta Jones

Participatory Ecological Monitoring (PEM). Participatory research methods for sustainability – toolkit #4
GAIA 31/4 (2022): 231–233 | **Keywords:** biodiversity, effectiveness, local communities, management, monitoring

Participatory Ecological Monitoring (PEM) is widely utilised as a conservation management methodology in many developing countries where communities rely heavily on natural resources for livelihoods. PEM is defined as the joint activity of a group of trained technicians and local community members; measuring threats and changes to biodiversity within a defined conservation zone using measurable indicators. PEM tracks environmental trends, resource use, and natural resource management processes relevant to community needs (Danielsen et al. 2022). Typically, PEM facilitates longer-term monitoring in ongoing conservation projects, and it can also be used to establish a state-zero data point, or as a baseline prior to new conservation projects. PEM data can support zoning of a managed area, development of conservation planning, or preparation of funding proposals. PEM approaches can be modified for areas under partici-

patory natural resource management, responding to difficulties in pursuing environmental information for decision making in times of rapid change (Gujit 1999). Successful PEM programmes involve different stakeholders in the process, useful for both ecological and socioeconomic outcomes.

Adopting PEM in conservation planning can:

- improve the knowledge base in terms of threats and observed changes to biodiversity,
- provide opportunities to discuss monitoring results and strengthen collaborations with local communities,
- develop transparency and trust towards improving environmental law enforcement,
- enhance conservation strategies to reduce anthropogenic threats, and
- engage local communities in the management of their own environment, with a view to increasing engagement and compliance.

In this series, we aim to alert GAIA readers to useful toolkits for participatory research methods in sustainability science. If you would like to contribute a toolkit description, please contact gaia@oekom.de.

Procedure

Typically, PEM methodologies directly involve community members in collecting pre-determined ecological and socio-economic data with supervision from trained technicians.

The PEM procedure consists of ten steps:

Geographically and administratively define the intervention area, and specific PEM objectives: Conservation managers and technicians should collate the existing knowledge on the managed area and associated natural resources (e.g. forest, lake/riparian ecosystem, marine/coastal wetland), to better understand the current status of conservation targets; facilitating the design of PEM methods, presentation of results/report, and prediction of logistical considerations (including access conditions, telephone coverage and safety/security). Technicians require clear definitions of the intervention zone, the site size, number of vil-

GAIA 31/4 (2022): 231–233

232 RESEARCH | PARTICIPATORY RESEARCH METHODS – TOOLKIT #4
Herizo T. Andrianandrasana et al.

A hole in the wall - Waterproofing Data Project



The flood is for everyone - Waterproofing Data project



Saving lives through mapping



Mapping with OpenStreetMap - Introduction to Disaster Mapping

The screenshot shows a YouTube search interface for 'hotsm mapping'. The search bar at the top contains the text 'hotsm mapping'. Below the search bar are navigation tabs: 'All', 'Shorts', 'Videos', 'Unwatched', 'Watched', 'Recently uploaded', 'Live', 'Under 4 min', '4 - 20 min', and 'Over 20 min'. On the left side, there are navigation options: 'Home', 'Shorts', 'Subscriptions', 'You', and 'History'. The main content area displays several video results:

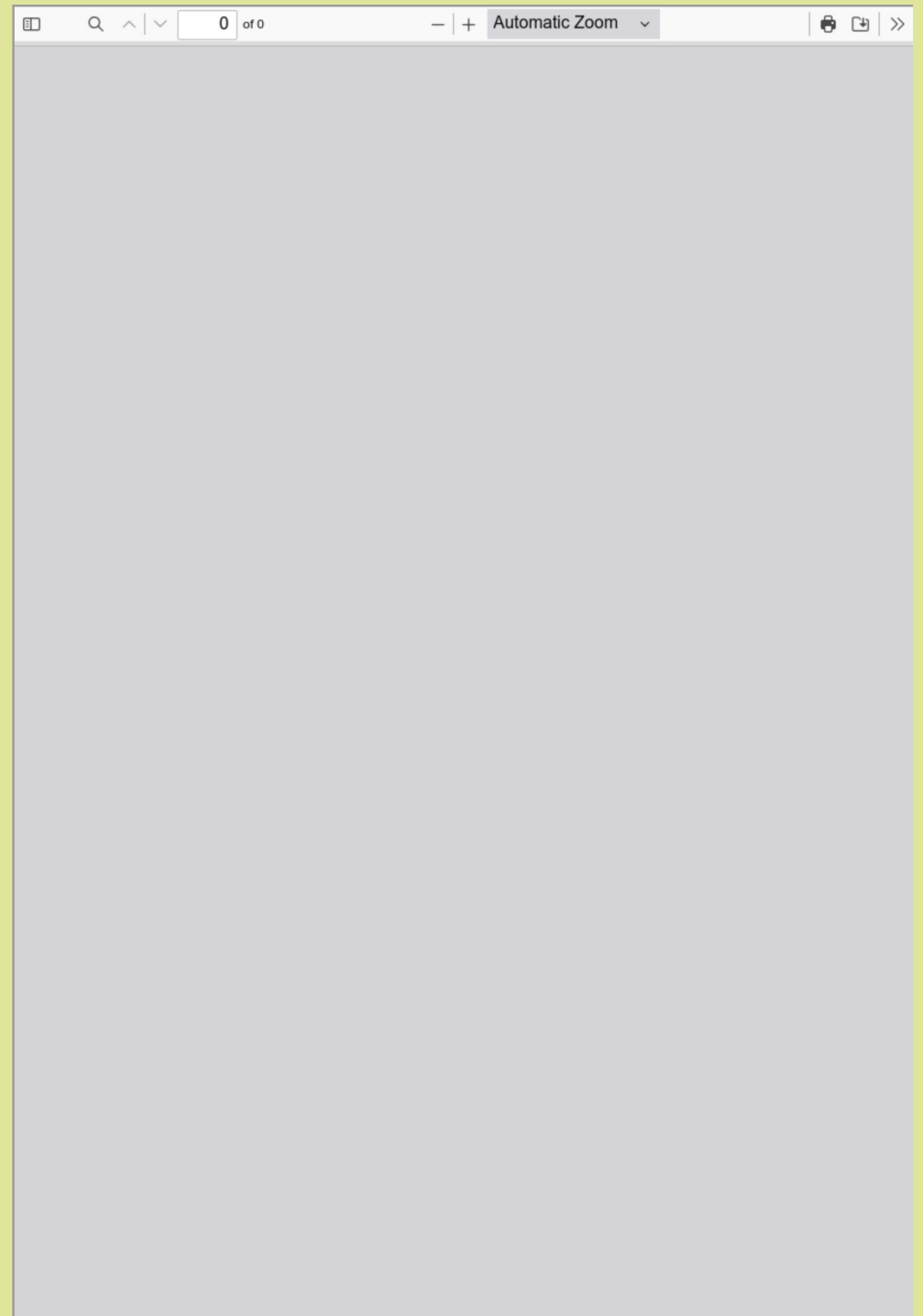
- HOTOSM Instructions**: 76 views • 4 months ago. Channel: Scott Lussier Maps. Description: "0:01 Okay in this lab we're going to do some humanitarian open street map mapping so we've talked about open street map osm in the ..."
- The Beginner's Guide To Contributing To HOTOSM Projects**: 647 views • 3 months ago. Channel: Humanitarian OpenStreetMap Team. Description: "HOT Outreachy intern, Eden Oluigbo, shares how to contribute to humanitarian open mapping with HOTI To get started in ..."
- Humanitarian OpenStreetMap Team**: @hotsm • 3.73K subscribers. Includes a 'Subscribe' button.
- Mapping roads in the Tasking Manager**: 7.4K views • 3 years ago. Channel: Humanitarian OpenStreetMap Team. Description: "If you have not created a mapping account follow the steps in this video first: <https://www.youtube.com/watch?v=wQdDgBOVY...>"

The video thumbnails show a 'Tasking Manager' interface with a map, a 'HOT' logo, and an aerial view of a city with buildings being mapped.

results

youtube.com

Geography H 20: Compounding Water Studies



WALK THE PIPELINE: Urban Infrastructure

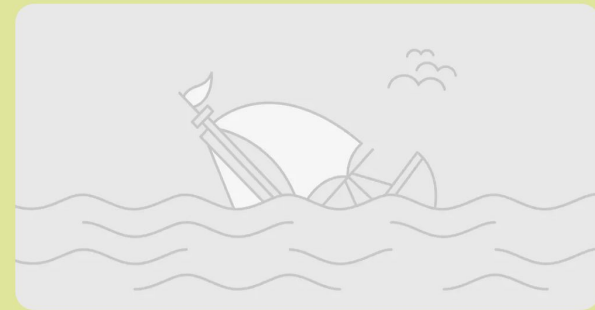
Landscapes in Bengaluru's Long Twentieth Century



<https://onlinelibrary.wiley.com/doi/pdfdirect/10...2427.12985>

onlinelibrary.wiley.com

Water governance and the colonial urban project: the Dharmambudhi lake in Bengaluru, India



<https://www.tandfonline.com/doi/full/10.1080/...>

tandfonline.com

Thinking beyond fairy lights and fountains: lessons from the waterscape of Bengaluru



Water governance

[Amaya Querejazu amaya.querejazu@udea.edu.co](#) View all authors and affiliations

Volume 30, Issue 2

<https://doi.org/10.1177/2336825X221089189>

Abstract

This essay is about water governance and relationality. It reflects on the questions that articulate this forum on relational International Relations (IR): what do relational theories of IR offer to the field and add to the debate about IR? What are the promises or limits of relational approaches, and how can or should discussion proceed? I narrate my personal story about exploring and experiencing relationality to offer some reflections and thoughts on these questions which are relevant not only for IR, but to the ways we engage reality. I illustrate the potential of relationality by referring to three dimensions where relationality provides with alternative thinking: the problem of ontological difference; the pluralization and diversification of ways of thinking and being and the engagement with the other than other-than-human. These aspects are some among many others, but they announce opportunities, challenges, tensions, contradictions and possibilities. In the end, the essay reveals not only a transformative experience but a very different approach to water governance providing the reader a general understanding of the alternative thinking derived from relational standpoints and the possibilities it opens to theorize IR and beyond.

Sharing a photo I took in one of my fieldworks 2022 at the La Mesa Reservoir in Quezon City, Philippines

I've always been a fan of taking "instagrammable" photos of water supply infrastructure that I encounter in my field visits.

La Mesa Reservoir is located in the heart of Quezon City---A major residential area of the Metro Manila, Philippines. La Mesa Reservoir has a capacity of 50 MCM, and serves as a "water bank" of flows coming from the main source of Metro Manila (Angat Reservoir).

If you would like to talk about urban water management, I am more than delighted to connect!
:)



Thinking Creatively



Presentation Skills Training & Get to know your cohort





This thread is specifically for the introduction presentations created for the virtual training. Please upload your complete presentations under the corresponding session post to which you've been assigned.









VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)



Dr. MAHENTHIRAN SATHIYAMOORTHY

Assistant Professor (Sr.) & Head

Department of Environmental and Water Resources Engineering

School of Civil Engineering, VIT, Vellore – 632 014

Tamil Nadu, India.

Contact No.: 9488329670

Email ID: mahenthiran.s@vit.ac.in

Member – Sustainability Initiatives at VIT



STS presentation

Wasin Punthong

Manchester Institute of Innovation Research

Alliance Manchester Business School

University of Manchester

Me to We: Unveiling My Journey from Self to Research



Vellore Institute of Technology, Tamil Nadu, India

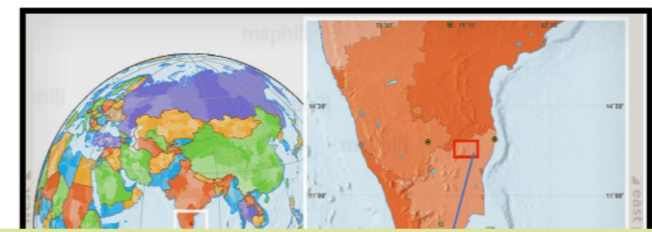
**Sustainability Training School 2024,
Presentation Training on 4.4.2024 (Thursday)
online mode**



University of Warwick, United Kingdom




S. Parimala Renganayaki, ME., PhD
Associate Professor
Department of Environmental and Water
Resources Engineering
School of Civil Engineering





Let's Connect :)



Dr Ehsan Khalefa
Research Fellow

ehsan.khalefa@port.ac.uk

[ORCID](#)

Research interests:

- Climate Change Studies
- Land Cover and Land Use Change Detection
- Deforestation and Forest Degradation Monitoring
- Precision Agriculture
- Habitat mapping, and environmental modelling

MSc Sustainable Management of Natural Resources

Dissertation Title:
An object-oriented classification of green space, using high resolution digital aerial imagery.

PhD in Physical Geography

Thesis Title:
Remote sensing of Savannah vegetation structure using the Geoscience Laser Altimeter System and L-band Synthetic Aperture Radar

Past Project Experience

- Land Use Project for Afajj Irrigation Systems Oman, funded by University of Nizwa, Oman
- HiVaCrom The High Value Crop Monitoring, funded by European Space Agency (ESA)
- Oman Earthwatch Environmental research projects: 1-The Jebel Samhan Research project, 2-The Arabian Tahr Ecosystem research, conservation and community project, 3-The socio-economic and environmental sustainability of the Afajj-Luzugh village, 4- Research for conservation of high-altitude Woodland habitats on Jebel Akhdar and Jebel Shams in Hajar Mountain Range & Land Use Changes and infrastructural development on Jebel Akhdar from 2007-2014.
- HiVACROM: High Value Crop Monitoring, UKRI funds awarded to LOGICA UK LTD

Postgraduate Certificate in Education- PGCE Geography

Current Project

Uses of satellite remote sensing to map and monitor the impacts of climate and land-use changes on surface water availability on the slopes of Mount Kilimanjaro. Funded by NERC & DJT






IGSD ECR Sustainability Training School
14th-19th April 2024 – University of Warwick, UK

SLIDE 1 OF 1
🔍 🗨️

Hello, everyone! Let's connect. See you around!

Maria Anjelica P. Ancheta "Anjelica"

- ▶ Country: Philippines
- ▶ Specialization: Urban water management and Hydrology
- ▶ 2nd Year PhD Student – Water Engineering and Management Program at the Asian Institute of Technology, Thailand
- ▶ MSc. Civil Engineering and BSc. Civil Engineering, University of the Philippines - Diliman
- ▶ E-mail: maria.anjelica.ancheta@ait.asia
- ▶ Worked 5 years in a water utility in Metro Manila, Philippines

Research topic: The resilience of urban water supply and sanitation systems considering climate change and extreme events

Expectations from Sustainability School

1. Global issues on resilience
2. Meet early career professionals

Welcome and Group Dinner 14/04/24

Welcome! Ura & Emellyne are in reception with your badge & can direct you where to go



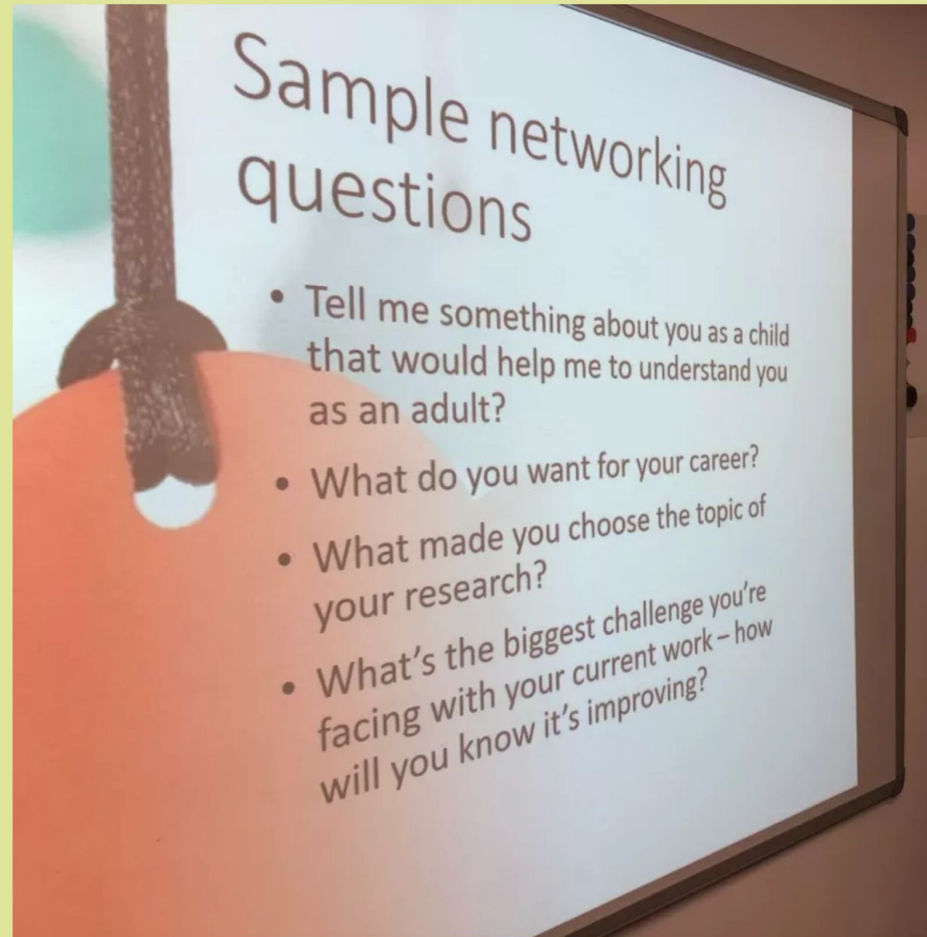
And the rest of our IGSD team -
looking forward to getting to know
you all



Group induction and ice-breaking activities "Knowing you, Knowing me" facilitated by Naomi Irvine

Building connections: Our cohort getting to know each other at Sustainability Training school's networking session.





Sample networking questions

- Tell me something about you as a child that would help me to understand you as an adult?
- What do you want for your career?
- What made you choose the topic of your research?
- What's the biggest challenge you're facing with your current work – how will you know it's improving?

what a vibrant session 'knowing you, knowing me'! there is definitely buzz in the air, and our participants begin to ID each other. Feeling very happy! Thank you, Naomi! Thank you, IGSD staff - Vangelis, Feng, Hita, Emellyne & Ura - and our mentors - Kee, Mike, and Liv - for making this first welcome so special!

If you want to keep talking about....

If you want to keep talking about informal settlements, environmental faecal contamination, human health and interdisciplinary research or Australia, London and reptiles, then come and find me!

See you all tomorrow :)

If you want to talk more about...

Urban flood risk management, digital twins or hydronumeric modeling let me know. There's many more topics I'd like to get in touch such as how are stakeholders, local authorities or citizen are involved in your research and projects.

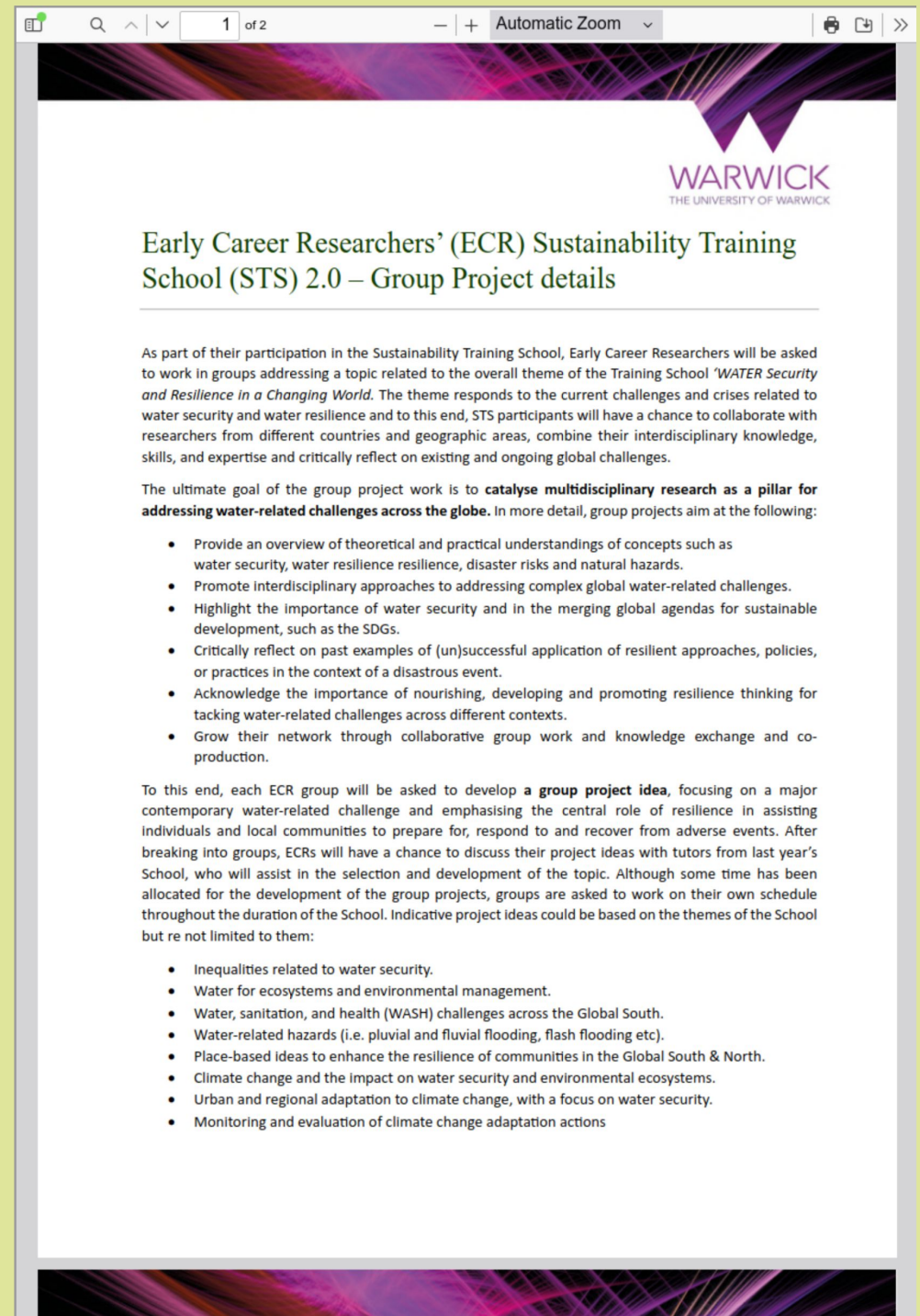
In case you want to know how anything works out in Germany just chat me up as well.

Hi, I am Tieza Santos. If you want to talk more about...

Water governance, urban water systems as complex adaptive systems, social-ecological systems, sociotechnical systems, co-production/co-creation/transdisciplinary methods, design thinking, water-food-energy nexus (natural resources particularly in urban regions) governance, climate governance, sustainability transformations, climate mitigation and resilience - we can talk and exchange ideas.

Group Project

Group project details



The screenshot shows a Padlet page with a purple and pink abstract background. At the top right is the Warwick University logo. The main title is 'Early Career Researchers' (ECR) Sustainability Training School (STS) 2.0 – Group Project details'. The text describes the purpose of the training school, which is to address water security and resilience challenges through interdisciplinary research. It outlines the goals of the group projects and provides a list of specific project ideas.

WARWICK
THE UNIVERSITY OF WARWICK

Early Career Researchers' (ECR) Sustainability Training School (STS) 2.0 – Group Project details

As part of their participation in the Sustainability Training School, Early Career Researchers will be asked to work in groups addressing a topic related to the overall theme of the Training School *'WATER Security and Resilience in a Changing World'*. The theme responds to the current challenges and crises related to water security and water resilience and to this end, STS participants will have a chance to collaborate with researchers from different countries and geographic areas, combine their interdisciplinary knowledge, skills, and expertise and critically reflect on existing and ongoing global challenges.

The ultimate goal of the group project work is to **catalyse multidisciplinary research as a pillar for addressing water-related challenges across the globe**. In more detail, group projects aim at the following:

- Provide an overview of theoretical and practical understandings of concepts such as water security, water resilience, disaster risks and natural hazards.
- Promote interdisciplinary approaches to addressing complex global water-related challenges.
- Highlight the importance of water security and in the merging global agendas for sustainable development, such as the SDGs.
- Critically reflect on past examples of (un)successful application of resilient approaches, policies, or practices in the context of a disastrous event.
- Acknowledge the importance of nourishing, developing and promoting resilience thinking for tackling water-related challenges across different contexts.
- Grow their network through collaborative group work and knowledge exchange and co-production.

To this end, each ECR group will be asked to develop a **group project idea**, focusing on a major contemporary water-related challenge and emphasising the central role of resilience in assisting individuals and local communities to prepare for, respond to and recover from adverse events. After breaking into groups, ECRs will have a chance to discuss their project ideas with tutors from last year's School, who will assist in the selection and development of the topic. Although some time has been allocated for the development of the group projects, groups are asked to work on their own schedule throughout the duration of the School. Indicative project ideas could be based on the themes of the School but are not limited to them:

- Inequalities related to water security.
- Water for ecosystems and environmental management.
- Water, sanitation, and health (WASH) challenges across the Global South.
- Water-related hazards (i.e. pluvial and fluvial flooding, flash flooding etc).
- Place-based ideas to enhance the resilience of communities in the Global South & North.
- Climate change and the impact on water security and environmental ecosystems.
- Urban and regional adaptation to climate change, with a focus on water security.
- Monitoring and evaluation of climate change adaptation actions

Group project - Final Groups

1 of 3 Automatic Zoom



Group Number	Participant Name	Participant University
Group 1	Tripti Singh	University of Warwick
	Adnan Mirhanoglu	University of Hamburg
	Khalefa Ehsan	University of Portsmouth
	Kingsley Orievulu	African Health Research Institute
Group 2	Debashis Roy	University of Glasgow
	Termitope Songbanmu	University of Lagos
	Tieza Mica Santos	Dresden Leibniz Graduate School and TU Dresden
	Pyae Mon Naing	Asian Institute of Technology
Group 3	Leah Barrett	Monash University
	Maria Anjelica Ancheta	Asian Institute of Technology
	Lars Backhaus	TU Dresden
	Dianyu Feng	University of Glasgow
Group 4	Romakala Banda	University of Glasgow
	Parimala Renganayaki Sundaram	Vellore Institute of Technology
	Rongkun Liu	International Centre for Integrated Mountain Development
	Wasin Punthong	University of Manchester
Group 5	Nana Konama	University of Rome Tor Vergata
	Kamal Devkota	KU Leuven
	Mahenthiran Sathiyamoorthy	Vellore Institute of Technology
	Erika Peklanska	University of the West of England



Monday 15/04/24

Welcome and Introduction



Sotaro Kita, Director of the National Centre for Research Culture, and DPVC Research

The screenshot shows a presentation slide with a dark purple header and a white body. The header contains the Warwick University logo and the title 'Research Culture at Warwick'. Below the title, the name 'Sotaro Kita' and his titles 'Deputy Pro Vice Chancellor (Research)' and 'Director of National Centre for Research Culture' are listed. The main content area has a white background with a dark purple triangle in the bottom right corner. The text 'Research culture is' is followed by a bullet point: 'Behavioural and organizational values and norms that shape the research community and research practice'. The Warwick University logo is also present in the bottom right corner of the slide.

1 of 5 Automatic Zoom


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Research Culture at Warwick

Sotaro Kita
Deputy Pro Vice Chancellor (Research)
Director of National Centre for Research Culture

Research culture is

- Behavioural and organizational values and norms that shape the research community and research practice

 WARWICK
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2



Jane Webb, Director of Education & incoming Head of School for Cross-Faculty Studies

The screenshot shows a Padlet board with three identical slides. Each slide has a light green background with a fine grid pattern. The text on each slide is as follows:

Welcome to
Warwick and the
School for Cross
Faculty Studies

Dr. Jane Webb

The top of the screenshot shows the Padlet interface with a search bar, navigation arrows, a page indicator '1 of 13', a zoom control set to 'Automatic Zoom', and icons for printing and sharing.

Welcoming message from Elena :)



Elena Korosteleva, IGSD Director

The screenshot shows a Padlet board with a presentation slide. The slide features a header image of a green globe on a fern leaf with the text "INSTITUTE FOR GLOBAL SUSTAINABLE DEVELOPMENT". Below the header, it lists "Elena Korosteleva, Professor of Politics & Global Sustainable Development, IGSD Director" and the date "15 April 2024". The slide also includes the Warwick University logo and the IGSD logo. The main content of the slide is divided into three sections: "RESEARCH for Global Sustainable Development at Warwick", "Our Strategy & objectives", and "Our KPIs 2022-27".

INSTITUTE FOR GLOBAL SUSTAINABLE DEVELOPMENT

Elena Korosteleva
Professor of Politics & Global Sustainable Development
IGSD Director

15 April 2024

WARWICK
THE UNIVERSITY OF WARWICK
INSTITUTE FOR GLOBAL SUSTAINABLE DEVELOPMENT

RESEARCH for Global Sustainable Development at Warwick

IGSD sets to be the **gateway** to transdisciplinary research on global sustainable development at Warwick, working with all faculties, research centres and institutes.

Its key themes include planetary challenges, resilience, climate change and CAS. It offers leadership in serious games, and participatory methods of research. It enjoys an extensive network of Thematic and Honorary Fellows.

At the core of its development, the IGSD aims to grow its own **cutting-edge research** and **impact**, to be recognised for its leadership, regionally, nationally and internationally.

Our Strategy & objectives

Our KPIs 2022-27:


- Mapping & visualization of our research across **SDGs** at Warwick
- Launch and growth of the **ECR STS** (June 2023)
- **Annual Sustainability Conference** (July 2024)

Overview of the week and introduction to different activities



Water-related research and sustainability at Warwick – Roundtable

Water-related research and sustainability at Warwick – Roundtable

 <p>Gary Bending Professor of Environmental Microbiology</p>	 <p>Feng Mao Associate Professor</p>	 <p>Jonathan Clarke Assistant Professor</p>	 <p>Hita Unnikrishnan Assistant Professor</p>	 <p>Soroush Abolfathi Associate Professor</p>
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Chaired by Vangelis Pitidis



Water-related research and sustainability at Warwick – Roundtable

Gary Bending

School of Life Sciences, University of Warwick

Director Warwick Environmental Systems Interdisciplinary Centre
Co-lead University of Warwick Sustainability 'Spotlight'



Campus Tour

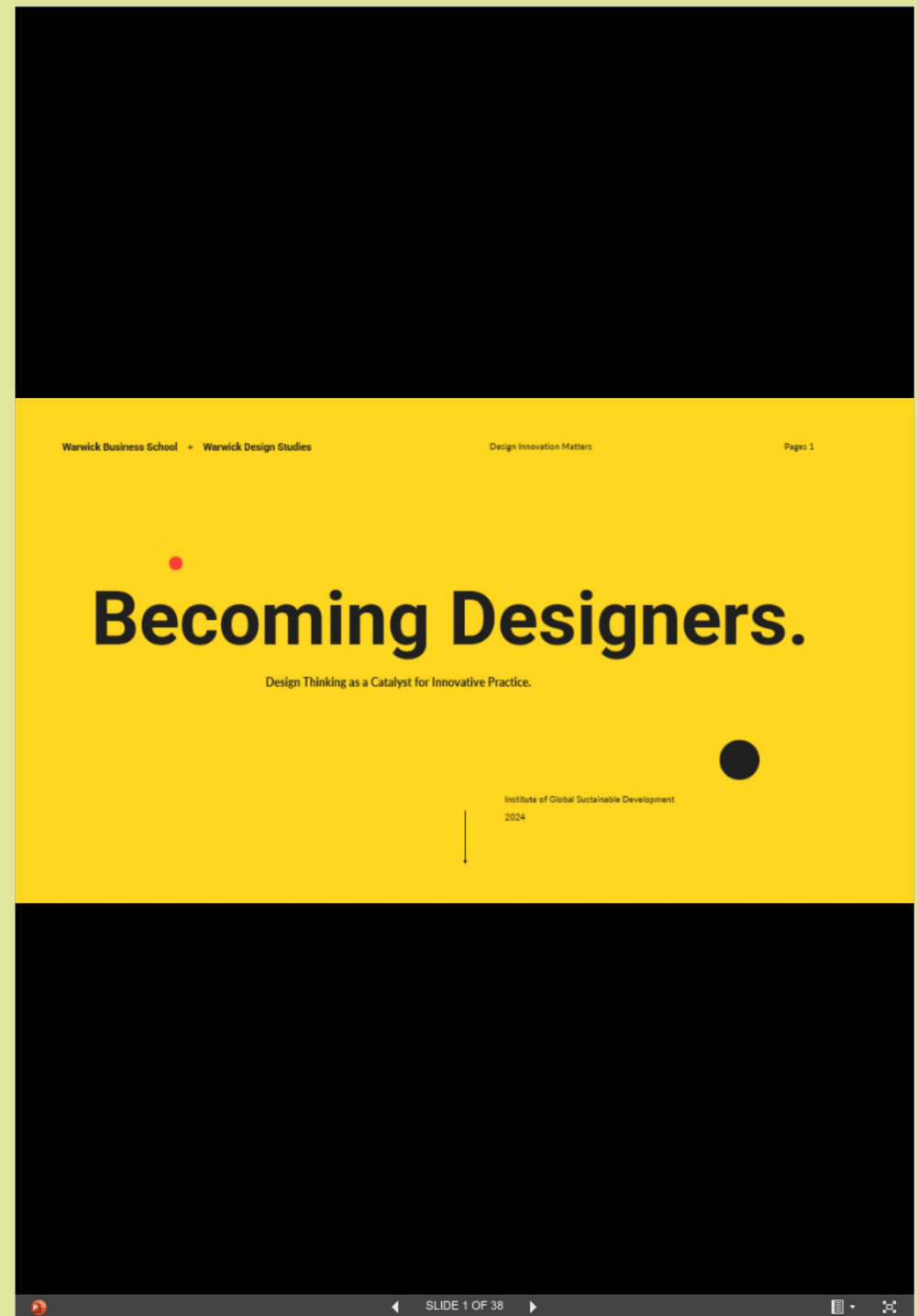


Campus tour

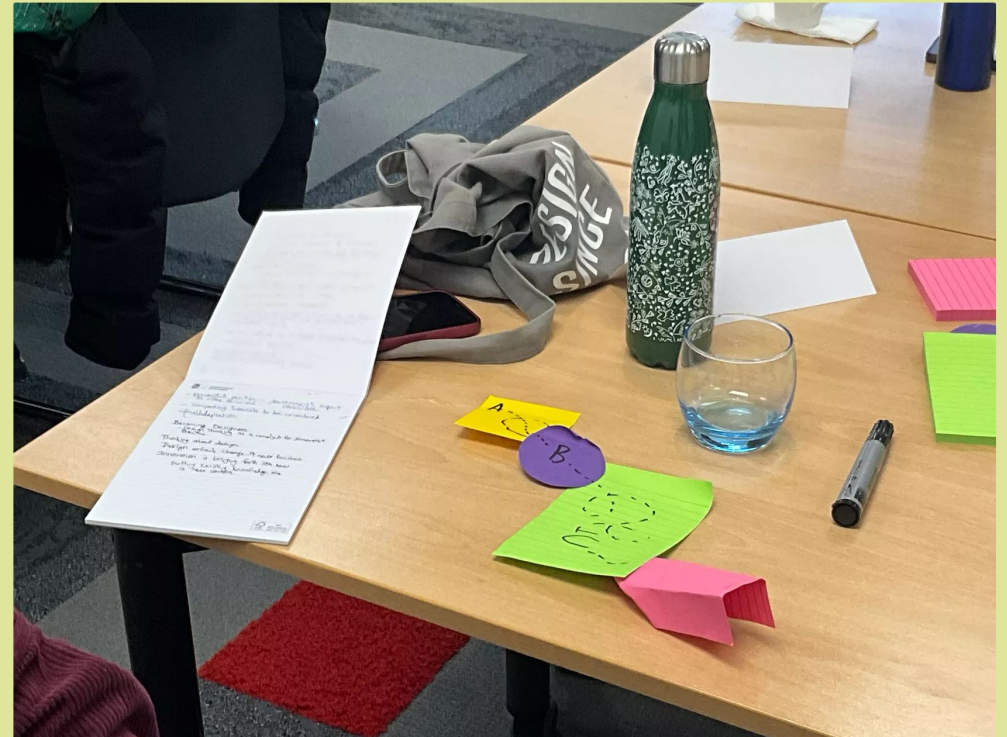
Although the weather was not favourable....



Innovative methods training: design thinking



A cool design



Meet the STS 1.0 cohort



Liv sharing on the value of conversations in developing new insights into their research



Contesting and reclaiming resilience through innovative methodologies



Liz Bagshaw - Key Note

Lord Teverson Keynote





Thoughts from Day 1

Hi everyone what an absolutely fantastic first day!

I really enjoyed chatting to everyone and listening to everyone's inputs into the sessions.

A few of the conversations and comments from today got me thinking particularly a conversation with Tripti about heat in informal settlements and the comments from Kingsley and Termitope about citizen science in low resource settings.

This got me thinking about two of my old colleagues Dr Emma Ramsey and Dr Erich Wolff who have worked on these themes.

I have uploaded two papers that I thought may be of interest but they both have few different papers published so I have put their google scholar links if you are interested in some more of their work.

Dr Emma Ramsey (Urban Heat Island)


<https://scholar.google.com/citations?user=k1Gn-fIAAAAJ&hl=en>

Dr Erich Wolff (Citizen Science - Flooding in Informal Contexts)

<https://scholar.google.com/citations?user=HIptvvsAAAAJ&hl=en>

Bring on day 2!

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Automatic Zoom



Urban Planning (ISSN: 2183-7635)
2021, Volume 6, Issue 4, Pages X-X
<https://doi.org/10.17645/up.v6i4.4648>

Article

Collaborating with communities: Citizen Science Flood Monitoring in Urban Informal Settlements

Erich Wolff^{1,*}, Matthew French², Noor Ilhamsyah³, Mere Jane Sawallau⁴ and Diego Ramirez-Lovering¹

¹ Faculty of Art, Design and Architecture, Monash University, Melbourne, Australia; E-Mail: erich.wolff@monash.edu
² Monash Sustainable Development Institute, Monash University, Melbourne, Australia;
³ Revitalising Informal Settlements and their Environments Program, Makassar, Indonesia;
⁴ Revitalising Informal Settlements and their Environments Program, Suva, Fiji;
 * Corresponding author

Submitted: 30 June 2021 | Accepted: 15 September 2021 | Published: in press

Abstract
 Concerns regarding the impacts of climate change on marginalised communities in the Global South have led to calls for affected communities to be more active as agents in the process of planning for climate change. While the value of involving communities in risk management is increasingly accepted, the development of appropriate tools to support community engagement in flood risk management projects remains nascent. Using the Revitalising Informal Settlements and their Environment (RISE) Program as a case study, the article interrogates the potential of citizen science to include disadvantaged urban communities in project-level flood risk reduction planning processes. This project collected more than 5000 photos taken by 26 community members living in 13 informal settlements in Fiji and Indonesia between 2018 and 2020. The case study documents the method used as well as the results achieved within this 2-year project. It discusses the method developed and implemented, outlines the main results, and provides lessons learned for others embarking on citizen science environmental monitoring projects. The case study indicates that the engagement model and the technology used were key to the success of the flood-monitoring project. The experiences with the practice of monitoring floods in collaboration with communities in Fiji and Indonesia provide insights into how similar projects could advance more participatory risk management practices. The article identifies how this kind of approach can collect valuable flood data while also promoting opportunities for local communities to be heard in the arena of risk reduction and climate change adaptation.

Keywords
 Citizen science; climate change; community-based methods; disasters; floods; informal settlements

Issue
 This article is part of the issue "Planning for the Local Impacts of Climate Change: Nobody Left Behind?" edited by Mark Seasons (University of Waterloo, Canada).
 © 2021 by the authors; licensee Cogitatio (Lisbon, Portugal). This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

1. Introduction
 The notion that disaster studies must better account for the needs of disadvantaged communities has been gaining traction since the 2030 Agenda for Sustainable Development's call for "leaving no one behind" (UN, 2015). This is reflected in arguments for the involvement of communities in data collection to respond to important challenges in the sustainable development agenda (Fritz et al., 2019). Among growing concerns with floods and other environmental

Urban Planning, Year, Volume X, Issue X, Pages X-X
1

Thoughts From Day 1 - Part 2

Chronic heat stress in tropical urban informal settlements

Emma E. Ramsay, Genie M. Fleming, Peter A. Faber, ..., Ruzka R. Taruc, Steven L. Chown, Grant A. Duffy

Highlights
Chronic heat stress was observed outdoors and in houses in informal settlements

Wet bulb temperature reached 30.5°C, approaching the limit of survival

Heat stress regularly exceeded recommended physical activity thresholds

Heat stress in informal settlements was underestimated by weather stations

Ramsay et al., *iScience* 24, 103248
November 19, 2021 © 2021 The Author(s).
<https://doi.org/10.1016/j.isci.2021.103248>

Daily maximum wet bulb temperature (°C)	Weather stations (Frequency)	Informal settlements (Frequency)
24	1	0
25	2	0
26	5	1
27	15	5
28	30	15
29	25	30
30	10	45
31	5	35
32	2	15
33	1	5
34	0	2
35	0	1

Reflection of Day 1 in 100 Words

The Prefixes of 'Disciplinarity'

In academia, it is not uncommon to come across contested terms. The notion 'disciplinarity' might be one of them. What scholars tend to do in re(de)fining those contested terms is giving them a prefix. Concocting a new concept by adding a prefix is dazzlingly intriguing because it shows how scholars are trying to come to grips with various forms of real-world challenges that have emerged. That is why we encounter concepts of 'trans/inter/cross/multi/pluridisciplinarity'. Travelling across the multiverse of 'trans/inter/cross/multi/pluridisciplinarity' might cause academic vertigo. But the good news is that there is no single ruling universe, leaving room for endless possibilities.

Wasin P.

15.04.24

Reflections on Day 1 - STS 2.0

I enjoyed presentations, settings and networking on this first day.

Some major highlights for me were the keynote presentation by Dr Liz Bagshaw, presentation on Design Thinking and Water-Related Research and Sustainability at Warwick Roundtable/Panel Session.

It was quite enlightening to hear about the research and diverse skills set within the IGSD and meet participants from diverse contexts and disciplines.

Also, the ambience and design of the spaces at the Scarman Centre has been illuminating for me. Truly inspiring, I'm loving it!

I'm looking forward to more engagements in the course of the week. Great start already!

[Temitope Sogbanmu](#)

U Lagos, Nigeria

More About Me on [LinkedIn](#), [X](#)



Tuesday 16/04/24

We started the second day with looking for names ...



Presentation Session 1

Chairs:

Hita Unnikrishnan & Feng Mao

Presenters:

Termitope Sogbanmu

Tieza Mica Santos

Tripti Singh

Pyae Mon Naing

Debashis Roy

'Water insecurity is a biggest challenge for people who live in the slums, Lagos' Termitope (2024)





Tripti presented her PhD research proposal on community resilience to intersecting crises. Participatory research methods were highlighted.

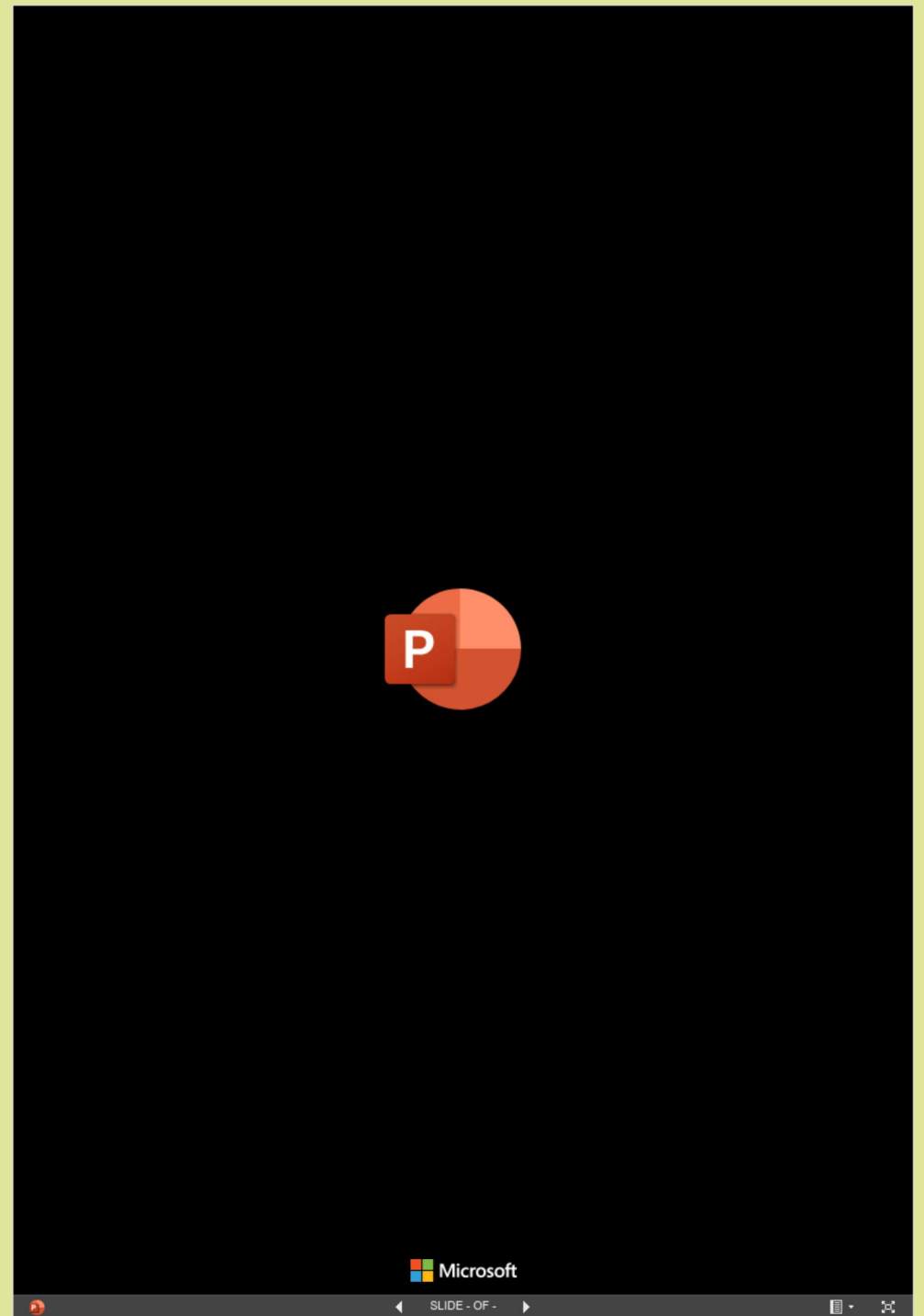




Mon presented her phd thesis that aims to explore the practicality of climate adaptation measure. This research is to provide a better understanding of flood and drought in integrated manner.



Pyae Mon Naing - Adapting to the Future: Assessing the Practicality of Climate Adaptation Measures



Debashis presented his thesis that aims to explore the linkage between drought and food security considering the socio-ecological system approach.





Tieza presented her research on urban water system transformations through social-ecological-technical systems framework.



Tieza Santos - Governing Urban Water Systems Transformation (Germany and Thailand)

The image shows a presentation slide with a blue and white color scheme. The background features a close-up photograph of water splashing, creating bubbles and droplets. The slide is titled "Governing urban water systems transformations through Social-Ecological-Technical Systems framework: Comparative cases of the Global South and Global North urban regions" and is presented by Tieza Mica Santos. It lists her affiliation with the Dresden Leibniz Graduate School, TU Dresden, and the Leibniz Institute for Ecological Urban and Regional Development. Supervisors are Prof. Dr. Marc Wolfram and Prof. Dr.-Ing. Jürgen Stamm. The slide also mentions the event "Water Security and Resilience in a Changing World" Early Career Researchers' Sustainability Training School 2024, held at the Institute for Global Sustainable Development from April 14-19, 2024, at Scarman, University of Warwick. Logos for DLGS, Leibniz Institute of Ecological Urban and Regional Development, and Technische Universität Dresden are present. A table of contents section titled "OVERVIEW" lists three parts: Part 1 Background, Part 2 Analytical and Governance Framework, and Part 3 BRIEF Introduction to Case Studies. The slide is viewed through a Padlet interface, showing a search bar, navigation arrows, and a page indicator "1 of 19".

DLGS Dresden Leibniz Graduate School

"Water Security and Resilience in a Changing World"
Early Career Researchers' Sustainability Training School 2024
Institute for Global Sustainable Development
14 - 19 April 2024, Scarman – University of Warwick

Governing urban water systems transformations through Social-Ecological-Technical Systems framework: Comparative cases of the Global South and Global North urban regions

Tieza Mica Santos
Dresden Leibniz Graduate School
TU Dresden
Leibniz Institute for Ecological Urban and Regional Development

Supervisors: Prof. Dr. Marc Wolfram / Prof. Dr.-Ing. Jürgen Stamm

www.dlgs-dresden.de

Leibniz Institute of Ecological Urban and Regional Development
TECHNISCHE UNIVERSITÄT DRESDEN

Photo: Pixaby

OVERVIEW

- PART 1**
Background
- PART 2**
Analytical and Governance Framework
- PART 3**
BRIEF Introduction to Case Studies

Photo: Pixaby

DRESDEN concept
Leibniz
DLGS Dresden Leibniz Graduate School

Warwick Institute of Engagement: Skills Training

We have invited Naomi Kay from WIE to conduct a skills training masterclass on effectively engaging your research with a wider audience. Follow the link to learn more about WIE.



Warwick Institute of Engagement

Warwick Institute of Engagement - find out more about WIE and our work at Warwi...
warwick.ac.uk

Warwick Institute of Engagement: Skills Training



Public Engagement Slides

The screenshot shows a presentation slide with a blue and purple gradient background. At the top, there is a search bar with '1 of 37' and a zoom control set to 'Automatic Zoom'. The slide features the Warwick Institute of Engagement logo, which consists of a stylized 'W' made of colorful lines. Below the logo, the text reads 'WARWICK INSTITUTE OF ENGAGEMENT'. The main title of the slide is 'Public Engagement with Sustainability Research', followed by the presenter's name and title: 'Naomi Kay - Engagement Officer, Warwick Institute of Engagement'. A decorative horizontal bar with a wavy pattern separates the header from the main content. The main content area has a white background and is titled 'This session'. It contains a bulleted list of three items: 'Explore some examples of public engagement', 'Talk about why we engage', and 'Plan your own activity using the [four principles of high quality public engagement](#)'. The bottom of the slide shows the Warwick Institute of Engagement logo and the text 'What is engagement?'.





Creative Collaboration - Team-building exercise



Team Building using Creative Methods

The image shows a screenshot of a Padlet presentation slide. The slide is titled "SUSTAINABILITY TRAINING SCHOOL 2024" and features the Warwick University logo. The background of the slide is a photograph of a modern building with a large glass facade and a curved roof. The slide is divided into two main sections: a top section with a purple background and a bottom section with a white background. The top section contains the title, subtitle "Team Building using Creative Methods", and the name of the presenter, Dr. Harriet Richmond. The bottom section is titled "Aims" and contains three bullet points. The Warwick University logo is also present in the bottom right corner of the slide.

WARWICK
THE UNIVERSITY OF WARWICK

SUSTAINABILITY TRAINING SCHOOL 2024

Team Building using Creative Methods

Dr Harriet Richmond, Researcher Development Consultant

Aims

- One of the challenges of working within a multi-disciplinary research team is communicating complex ideas using a shared language, to reach mutual understanding about how to articulate and address research problems.
- The aim of this session is to introduce you to an arts-based method (collage making) for research thinking, to support you to work effectively as a team to progress your group projects.
- Your team will produce a collage AND a five-minute presentation that explains the collage and research problem

Team Building Using Creative Methods Hand Out

1 of 6 Automatic Zoom

Creative Methods to Enhance Research Thinking and Writing

Please note that this document is designed to facilitate reflective writing and discussion during the workshop. This document is for you to keep, so that you can refer to your discussions during the workshop.

Workshop participants who are participating in the workshop as research participants in the Enhancing Research Culture Fund (ERCF) research project: *Research practices as sites of research culture: The barriers to, and enablers of, research identified through creative workshops that support researchers to explore research problems*, are asked to hand this document in at the end of the workshop, so that it can be photographed. Please see the Participant Information Sheet about this study for further information about how your data is captured and stored.

Research participants only complete the section below.

Your name:	
Your email address:	

Research participants only: Important information about how you created your collage

There are various groups and individuals who may participate in this collage making activity, as part of the research project described above. Please would you indicate:

Who created your collage? Please choose from one of the options below by putting an X in the appropriate box.

Did you make your collage:

A) As part of a group?	
B) By yourself?	

1













Group Work

Secret meeting



Reflections on STS 2.0 Day 2

There's been no dull moment so far throughout this training school. Starting the day with 10 mins presentations alongside my group members to the Skills Training on Public Engagement in Sustainability research and the Creative Methods Approach for Collaboration and Team Building, it's been a learning full and enjoyable journey for me.

I've met and connected with diverse people including my group members, co-created an amazing art borne out of our project (that's one area that I hope to mainstream into my work and teaching when I get back to my country), It's been enjoyable and work full.

Kudos to the IGSD Team.

[Temitope Sogbanmu, PhD](#)

Connect with me on [LinkedIn](#), [X](#)

Connect with the [EUEPiN Project](#) on [LinkedIn](#), [X](#)



Wednesday 17/04/24

Presentation Session 2

Chairs: Simoni Da Ros & Lory Barile

Presenters:

Leah Barrett

Maria Anjelica Ancheta

Parimala Renganayaki Sundaram

Dianyu Feng

Romakala Banda

Risk assessment for hurricane-induced pluvial flooding in urban areas

- A case study of Hurricane Harvey in Houston, USA

Dianyu Feng

School of Social & Environmental Sustainability
University of Glasgow

Early Career Researcher Sustainability Training School (ECR STS 2.0)
17 April 2024

❖ What is hurricane-induced urban pluvial flooding ?

Hurricane

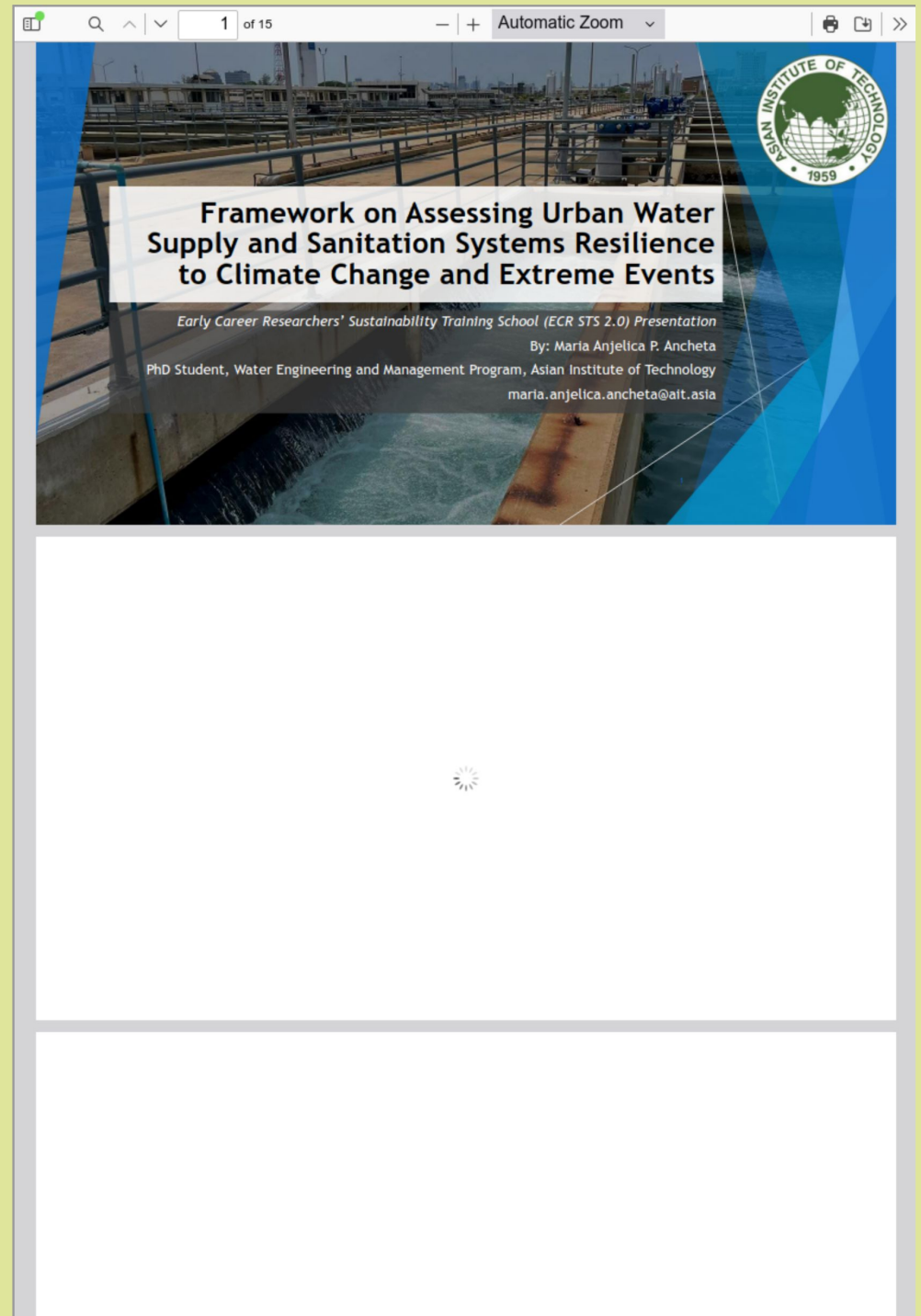


In the future...



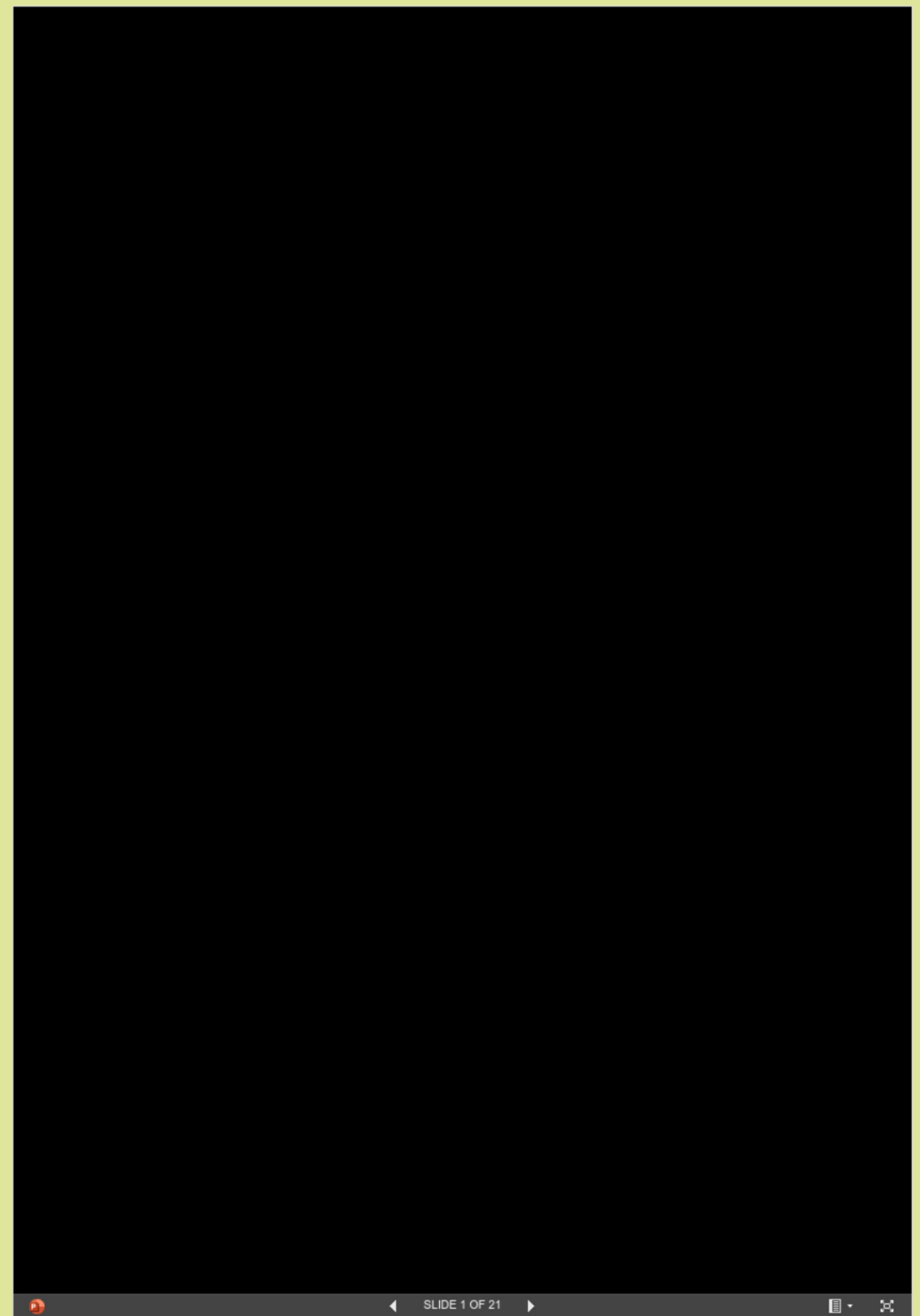
Maria Anjelica P. Ancheta - Framework on Assessing Urban Water Supply and Sanitation Systems Resilience to Climate Change and Extreme Events ECR STS 2024

Sharing the PDF format of my presentation. Couldn't upload the PPTX because of the photo resolution.





Its me Parimala Renganayaki,VIT India, groundwater studies



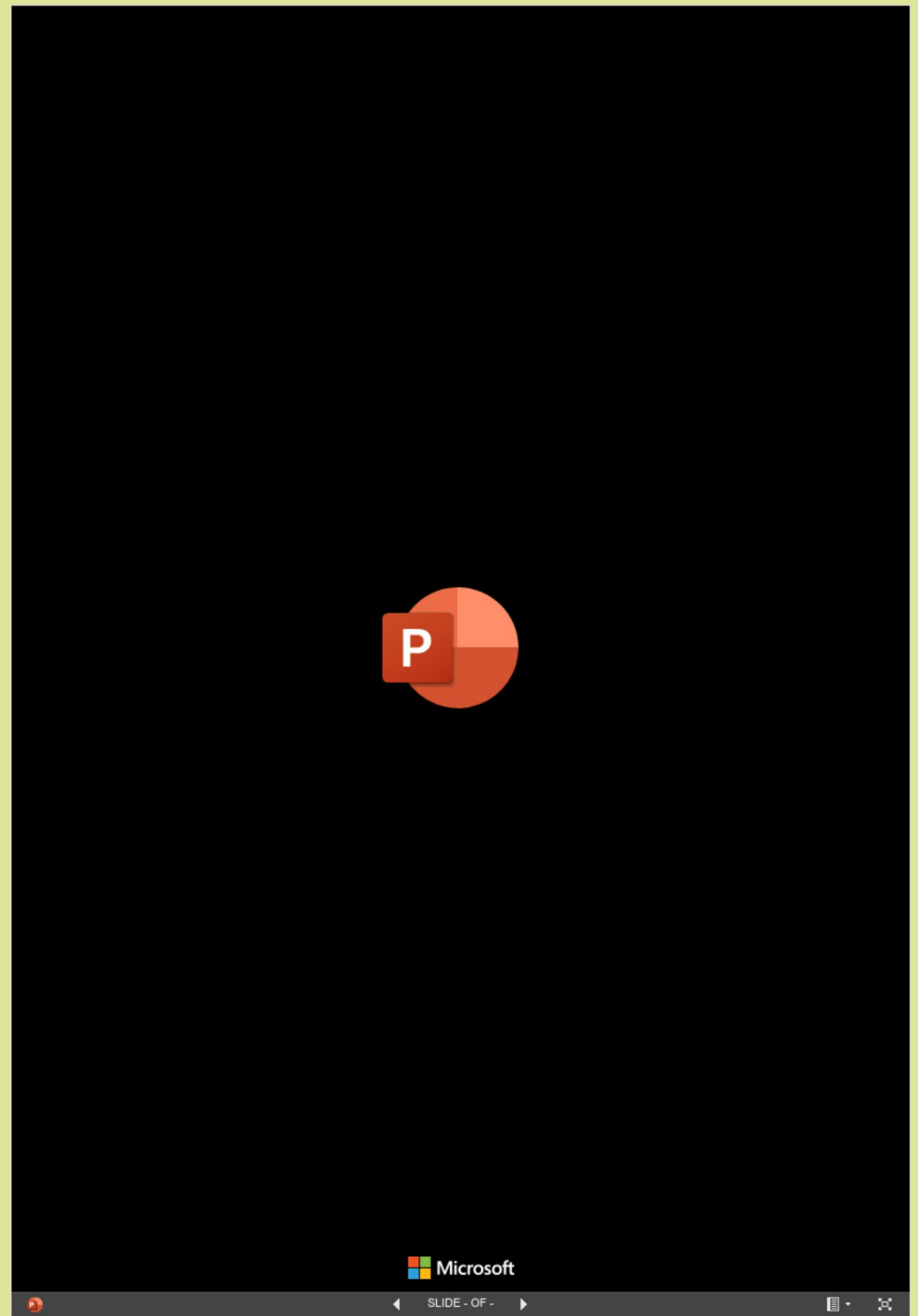
Innovative methods training

Vangelis Pitidis: participatory methods for sustainability research

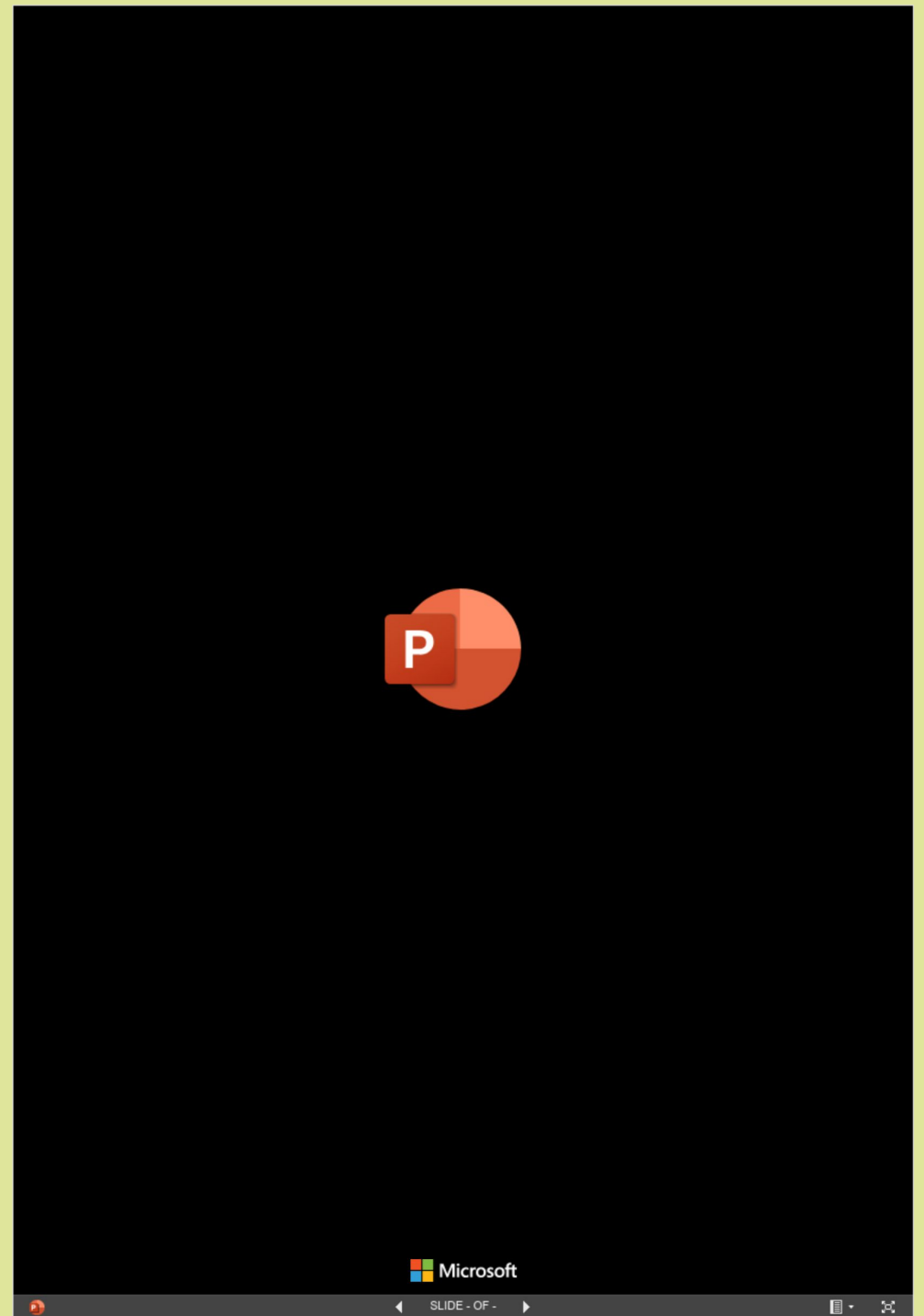
Feng Mao: serious games

Lory Barile

Feng Mao - Serious Games Presentation



Lory Barile - Skills Presentation



Field Trip and Social

Kenilworth Castle visit with Traditional Cream Tea



Kenilworth Castle and Elizabethan Garden

Once home to Robert Dudley, the great love of Queen Elizabeth I. Today you can w...
english-heritage.org.uk

Group Photo



Kenilworth Castle



Presentation 3

Chairs:

Berend de Groot & Paul Hansbury

Presenters:

Adnan Mirhanoglu

Kamal Devkota

Rongkun Liu

Wasin Punthong

Nana Konama

Presentation - Adnan

The image shows a Padlet presentation interface. At the top, there is a navigation bar with a search icon, a zoom control (minus and plus signs), a page indicator showing '1 of 18', and a dropdown menu set to 'Automatic Zoom'. On the right side of the navigation bar are icons for printing, sharing, and navigating to the next slide. The main area of the presentation is a grid of three empty white rectangular cells. The top cell contains a small loading spinner icon, indicating that content is still being loaded. The bottom two cells are currently empty.





ICIMOD

HKH, Community Resilience, and Research Collaboration

Rongkun Liu, PhD
17 April 2024



Presentation

Bringing Equity into the Multi-Scalar Governance Approach to Urban Water Management: Some Insights from the Case of Bangkok Metropolitan Administration (BMA)

Wasin Punthong
Manchester Institute of Innovation Research
wasin.punthong@manchester.ac.uk

STS PRESENTATION



1



SLIDE 1 OF 11



Expand your thinking on the ideas that we think are fixed. The idea of nation borders are fairly contemporary . There is more to interventions than just the technical factors.



Reflections on STS 2.0 Day 3

It was an enlightening day with the sessions on Serious Games by Feng and Participatory Mapping by Evangelis, Presentations by the different groups including our comedian.

Then the trip to the Kenilworth Castle and deep dive into the group projects. Interesting and learning full all the way. Thanks Emellyne for the chats we had.



Thursday 18/04/24

Presentation Session 4

Chairs:

Obas Ebohon, CCCU & Elena Korosteleva

Presenters:

Lars Backhaus

Mahenthiran Sathiyamoorthy

Ehsan Khalefa

Erika Peklanska

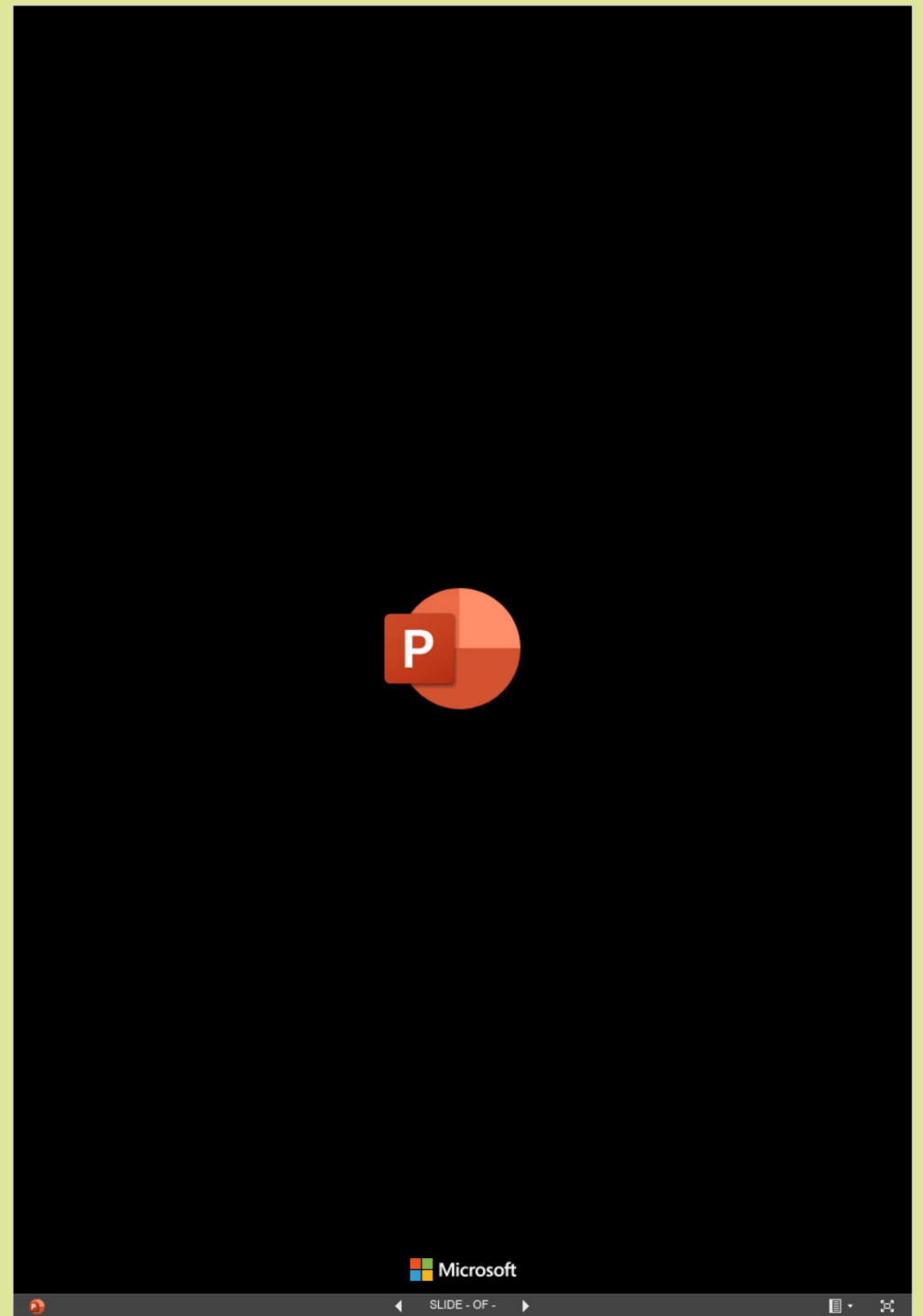
Kingley Orievulu

ECR cohort 2.0 day 4 final morning presentation picture

My Presentation today. Thank you IGSD for this opportunity to share my work with the colleagues today.



Kingsley Presentation: Session 4.1



My presentation @ STS







Ehsan Khalefa

USES OF SATELLITE REMOTE SENSING TO MAP AND MONITOR THE IMPACTS OF CLIMATE AND LAND USE CHANGES ON SURFACE WATER AVAILABILITY ON THE SLOPES OF MOUNT KILIMANJARO

Research Project:

Uses of satellite remote sensing to map and monitor the impacts of climate and land-use changes on surface water availability on the slopes of Mount Kilimanjaro

UNIVERSITY OF PORTSMOUTH UKRI Natural Environment Research Council Daphne Jackson Trust



Dr Ehsan Khalefa
Research Fellow

Dr Nick Pepin
Associate Professor in Climate Science

Prof Richard Teeuw
Professor of Geoinformatics and Disaster Risk Reduction

IGSD ECR Sustainability Training School
14th-19th April 2024 – University of Warwick, UK

SLIDE 1 OF 13

Lars Backhaus - Urban Digital Twins for Flood Risk Management

1 of 9 Automatic Zoom

TECHNISCHE UNIVERSITÄT DRESDEN

DRESDEN concept

Lars Backhaus
Institute of Hydraulic Engineering and Technical Hydromechanics
Dresden University of Technology, Germany

ECS STS 2.0 Urban Digital Twins for Flood Risk Management

April 15th 2024

IWD Institut für Wasserbau und Technische Hydromechanik

Elbe River Flood December 2023



TECHNISCHE UNIVERSITÄT DRESDEN ECS STS 2.0 Lars Backhaus / Institute of Hydraulic Engineering and Technical Hydromechanics April 15th 2024 Slide 2 IWD DRESDEN concept

Urban Digital Twins (UDT) for Flood Risk Management (FRM)

*Challenges in water security, urban resilience and sustainable urban development require a **combined effort** of varying actors: **public authorities, stakeholders, scientists and citizen** altogether.*

Ubiquitous and transdisciplinary **challenges**:

- How can we **model coupled hydrological processes**?
- How can we handle **urban complexity** and **development dynamics**?
- How can we effectively **communicate knowledge**?
- How can we **raise awareness** and **improve acceptance of measures**?



Innovative methods training

Elena Korosteleva & Leonie Schmidt: Citizen juries & assemblies

Michael Lim, Kee and Liv Nielson: Participatory film-making

Citizen Assembly



WARWICK
THE UNIVERSITY OF WARWICK

Stoke Primary

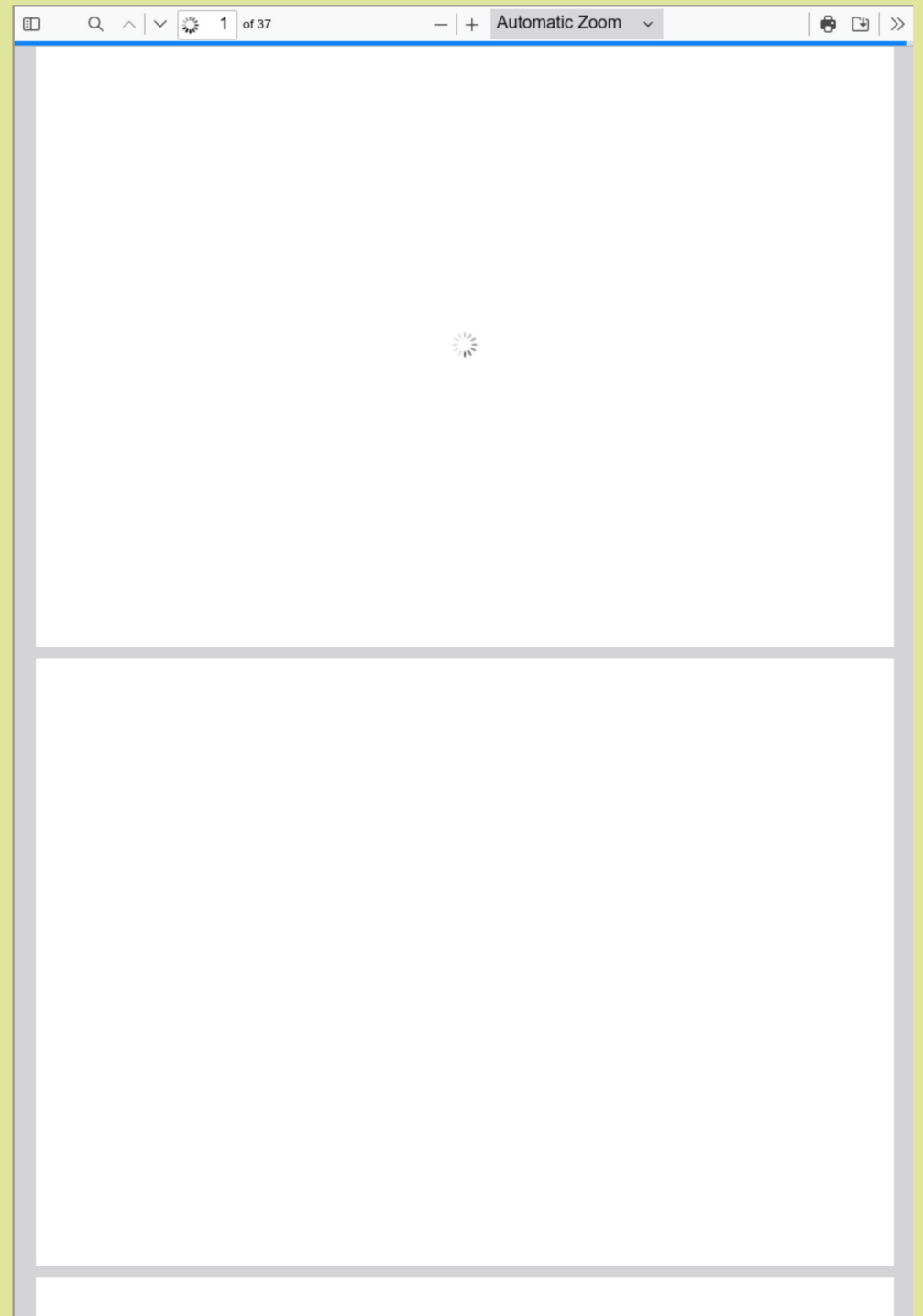
Destination
Ball Hill

grapeVine
GROWING LIVES AND COMMUNITIES

Citizens' Jury & Assembly on Air Pollution - Ball Hill, Coventry

A community organising and citizens science approach
-Leonie Schmid, Community Organiser Grapevine

Participatory method in action: Focus on photovoice



Research IMPACT (academia, policy world, industry & business)

Chair: Vangelis Pitidis

Sarah Stear, Head of Climate & Sustainability, WCC

Catherine Louch, Warwick Business Partnerships

Bernard Koomson, CIM

Giuliana Battisti, WBS

Berend de Groot, former EU diplomat, & IGSD Honorary Fellow

Research Impact panel

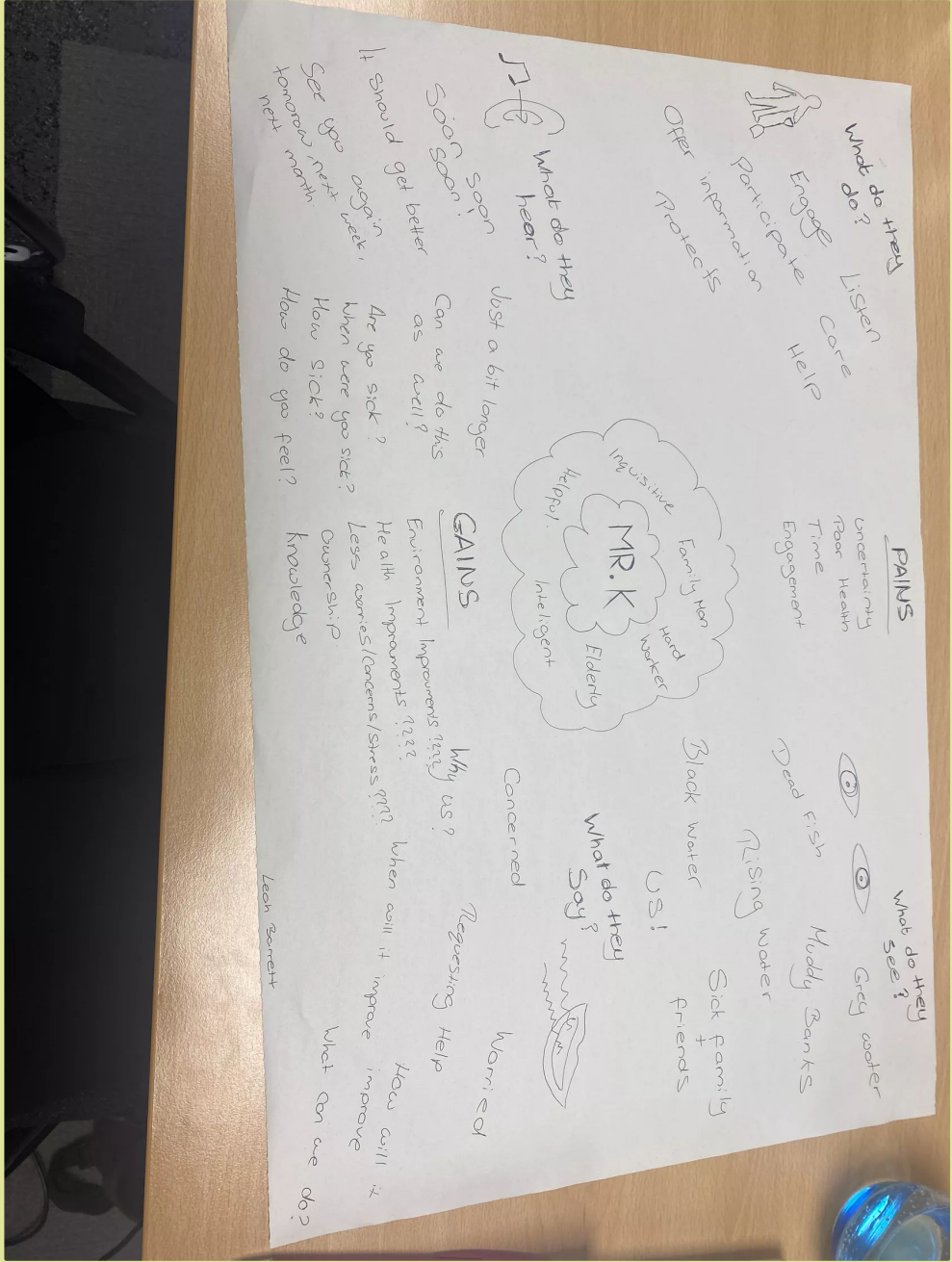


Research Impact for Who? - Stake Holder Empathy Mapping

A reflection session with a facilitator **Naomi Irvine**

Empathy Mapping

Really nice exercise, really got me thinking on a deeper level!



Group Work

Happy as a clam 🤣😂😂😂🤔

As happy as a clam at high water



My granddaughter says it all



Growing some Chilis at home



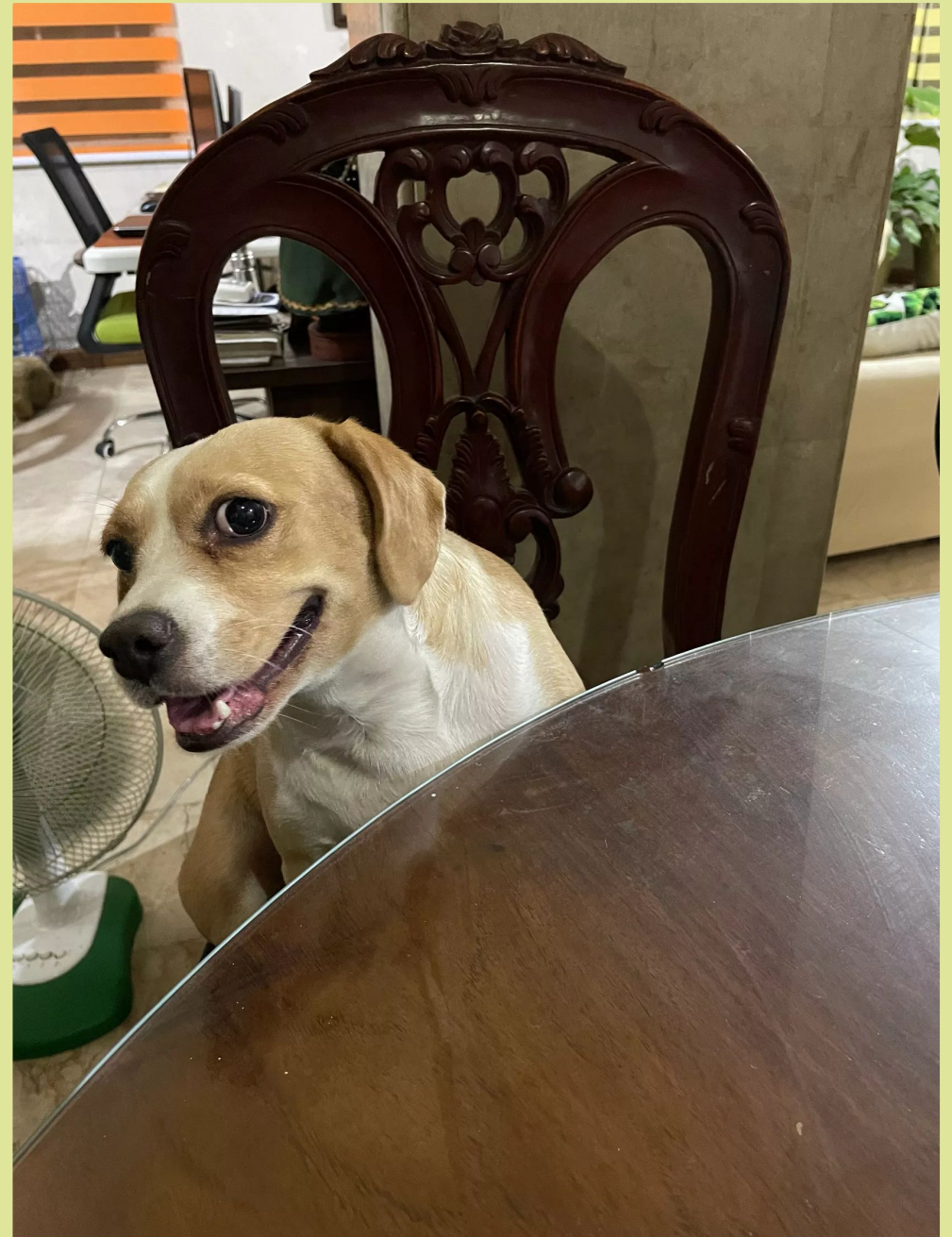
Nana



Sharing all emotions with my loved one is my happiness



Anjelica's Happiness



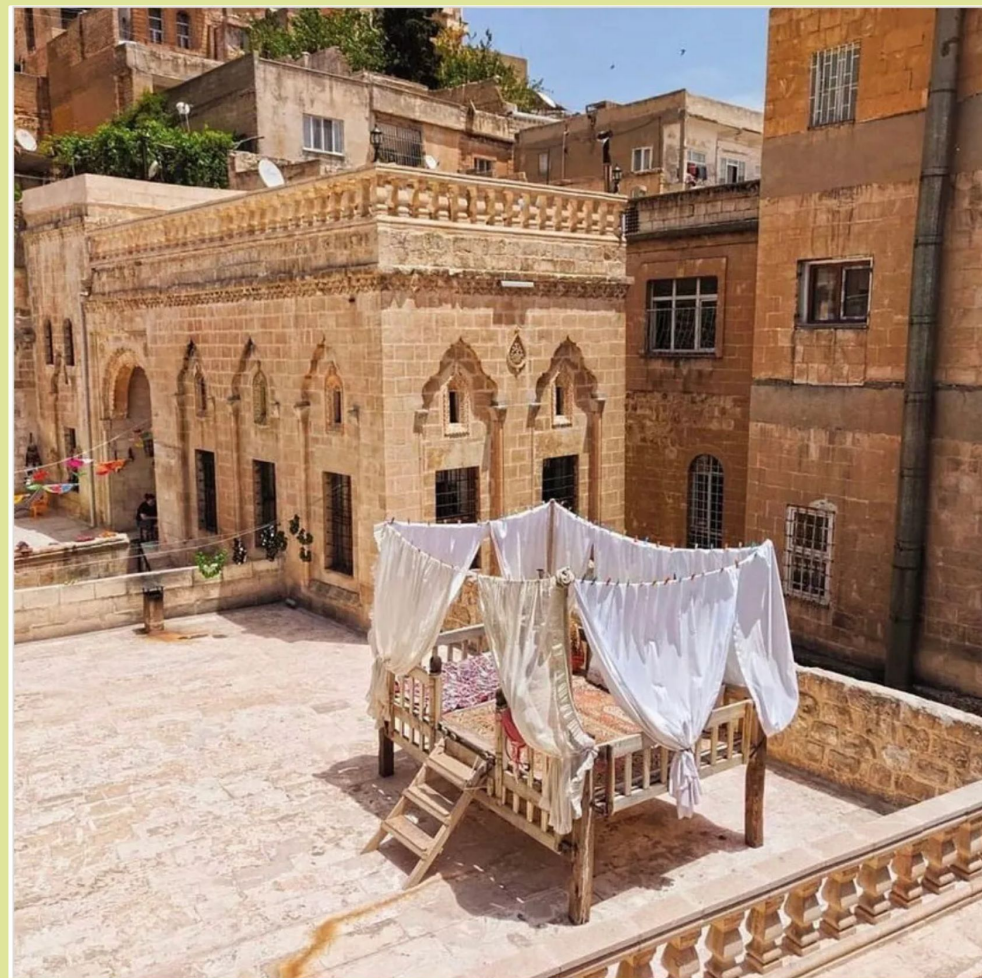
Happiness is finding delight in the simplest of things like comfort food. - Tieza



Hope



Sleeping on the roof



RB



From Kamal



Pullpork burger

Good food makes me happy. Pullpork burger from Borough Market was really good and it makes me and my tummy realllly happy :)

Mon



Rongkun

However, when I visited Bhutan, it turned out to be a different story.



Being a huge fan of football and CR7, in particular, this photo makes me happy. I always appreciate his thoughts on humanity ♥.



Happiness



Family and warmth



Ehsan



Erika



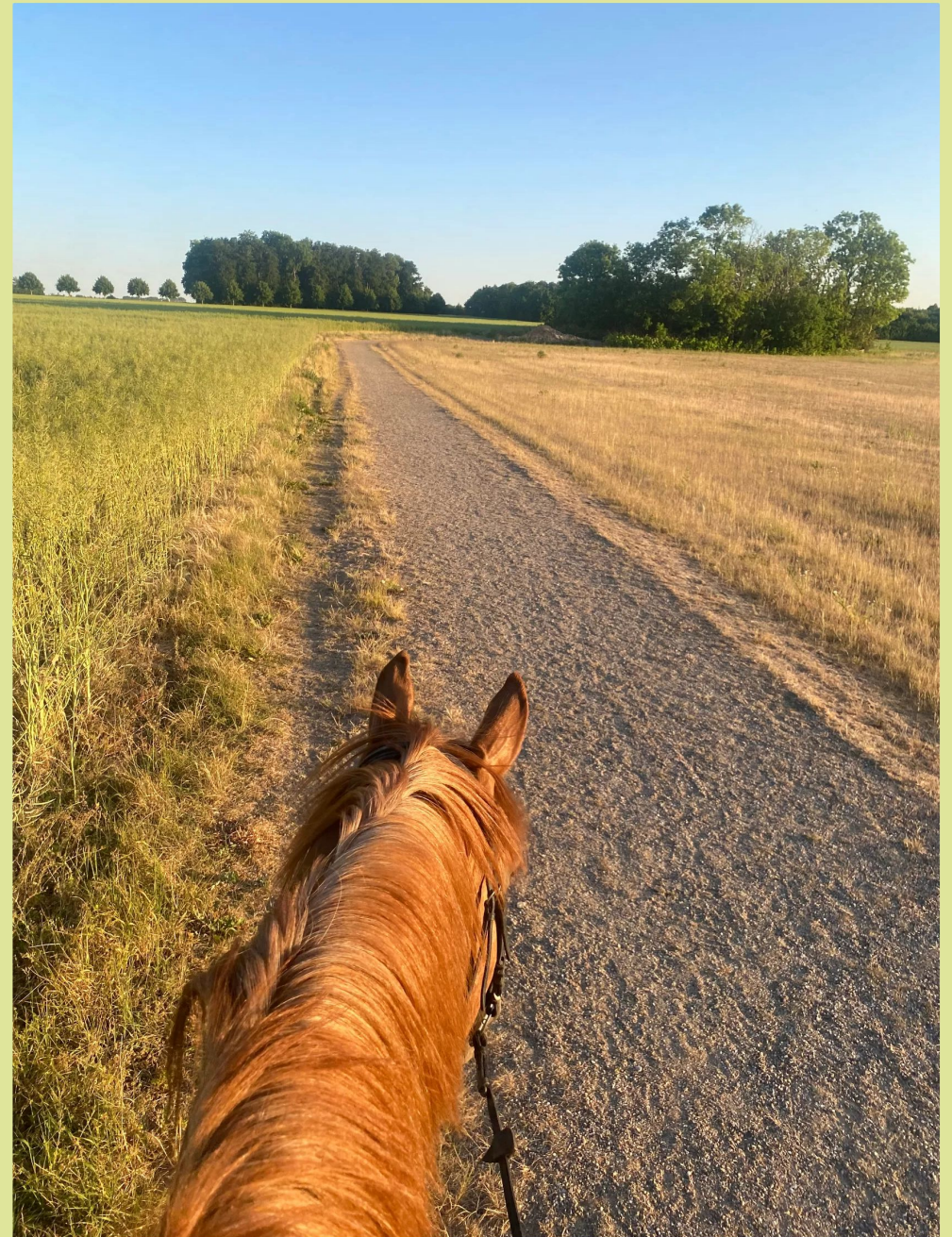
Happiness for me: home still life



I am so happy to share my research and sustainability initiatives of VIT to all the participants of STS. The suggestions from them is also awesome.



Nature, Peace, joy. Alone together in the now.



Knowing that you don't have to wonder about it...
That is happiness.

**FALL IN LOVE WITH
SOMEBODY WHO WILL
NEVER LET YOU GO TO
SLEEP WONDERING IF
YOU STILL MATTER.**

Dianyu's happiness



Friday 19/04/24

Group Presentations

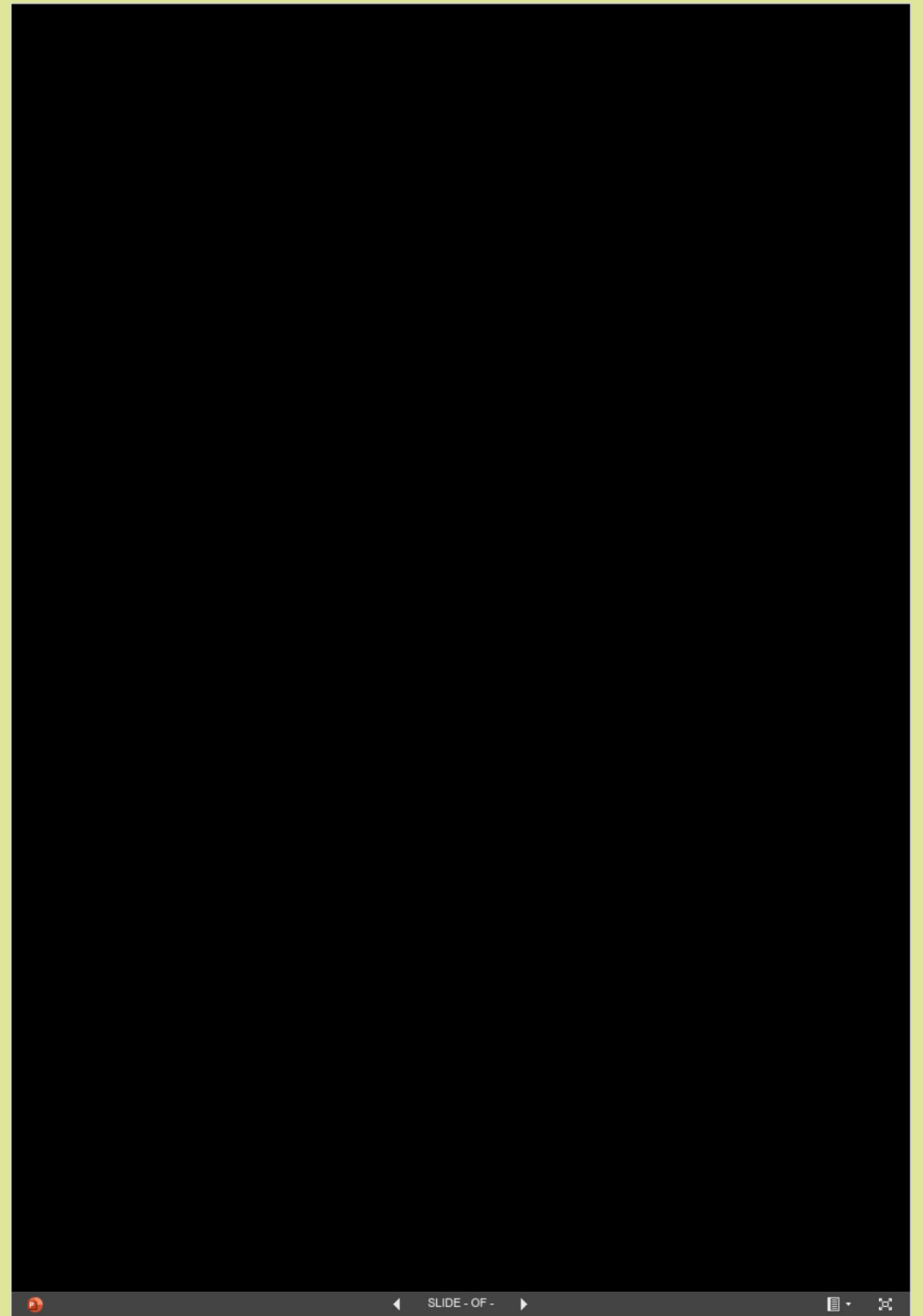
Group 1: WaterActive



Water Savers_IGSD.pptx

by ehsan.khalefa
docs.google.com

Group 2: RiBio



Group 3: ¿Hydropolis? by: Well Waters



By: Well Water Studios

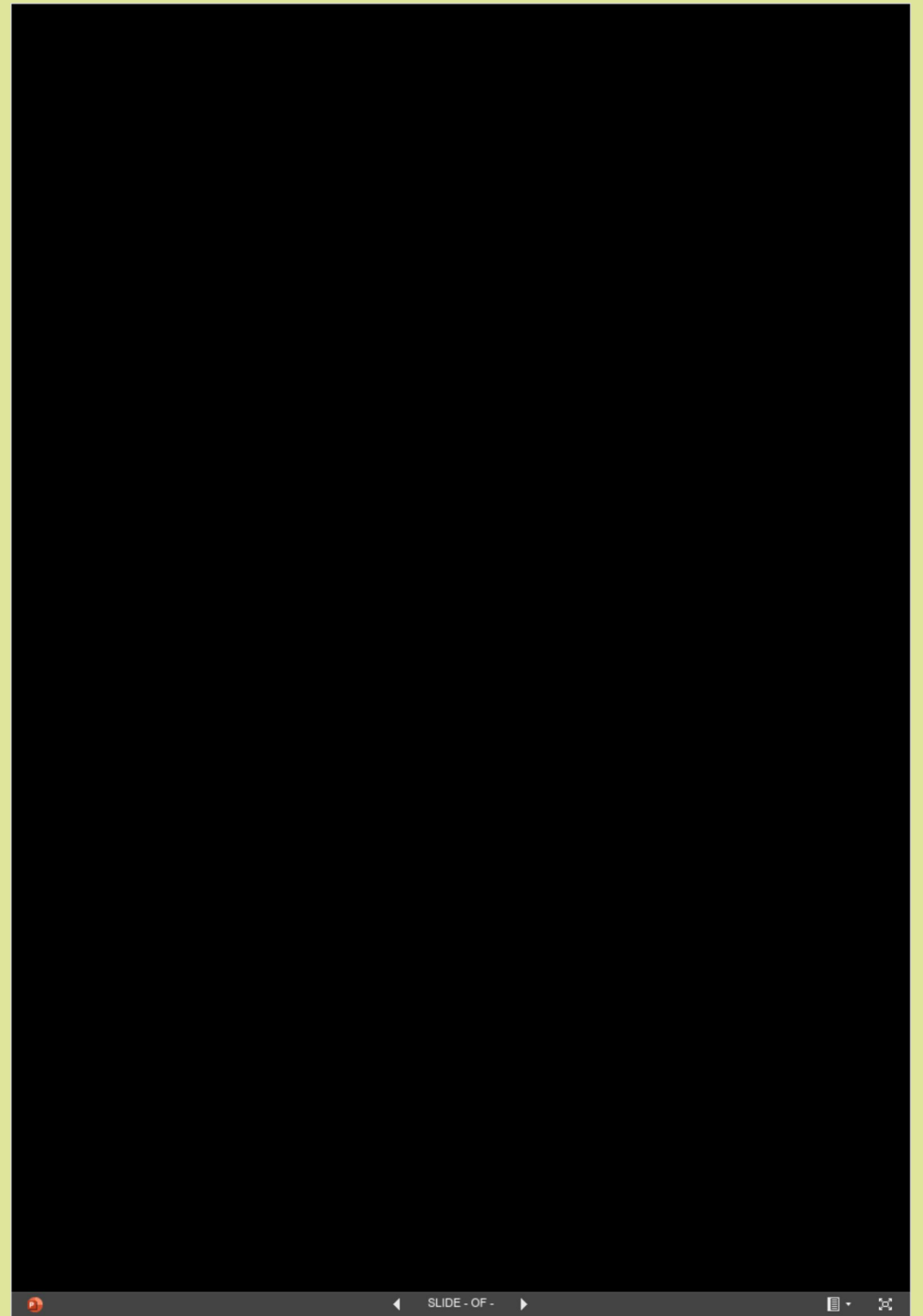
Leah Barrett, Lars Backhaus, Dianyu Feng, Anjelica Ancheta



The Journey



Group 4



Award ceremony

Panel of judges:

Rachel Moseley

Jane Webb

Kerry Kirwan

Wendy Coy

Followed by a keynote from Obas Ebohon,
Dean, Academy for Sustainable Futures, Canterbury Christ Church University

The winning group of the STS 2.0 Award for the best group presentation :)



Roundtable with ACU members

Chair: Feng Mao

S Parimala Renganayaki

Vellore Institute of Technology (VIT) – India

Temitope Sogbanmu

University of Lagos (UNILAG) – Nigeria

Kingsley Orievulu

Africa Health Research Institute (AHRI) - South Africa

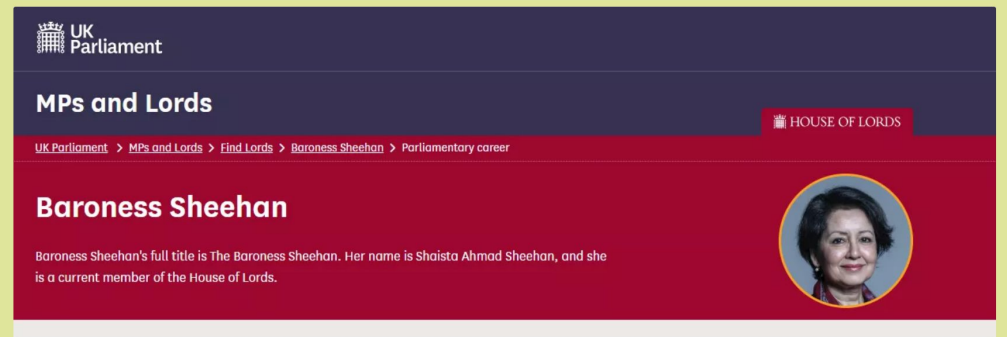
Keynote Speakers

Baroness Sheehan, Chair, Lords Environment & Climate Change Committee

Adrian Healy, UKRI Future Leaders Fellow

Baroness Sheehan

<https://members.parliament.uk/member/4548/career>



The screenshot shows the profile page for Baroness Sheehan on the UK Parliament website. The page has a dark blue header with the UK Parliament logo and the text 'UK Parliament'. Below the header is a red navigation bar with the text 'MPs and Lords' and a 'HOUSE OF LORDS' button. A breadcrumb trail reads 'UK Parliament > MPs and Lords > Find Lords > Baroness Sheehan > Parliamentary career'. The main content area has a red background and features the name 'Baroness Sheehan' in large white text. To the right is a circular portrait of Baroness Sheehan. Below the name, a short bio states: 'Baroness Sheehan's full title is The Baroness Sheehan. Her name is Shaista Ahmad Sheehan, and she is a current member of the House of Lords.'

Dr Adrian Healy



<https://profiles.cardiff.ac.uk/staff/healya2>

profiles.cardiff.ac.uk

Monitoring Groundwater Use as a Domestic Water Source by

Urban Households: Analysis of Data from Lagos State, Nigeria and Sub-Saharan Africa with Implications for Policy and Practice





Article

Monitoring Groundwater Use as a Domestic Water Source by Urban Households: Analysis of Data from Lagos State, Nigeria and Sub-Saharan Africa with Implications for Policy and Practice

Kerstin Danert ¹ and Adrian Healy ^{2,*}

¹ Ask for Water GmbH, 9014 St. Gallen, Switzerland; Kerstin.Danert@ask-for-water.ch

² School of Geography and Planning, Cardiff University, Cardiff CF10 3WA, UK

* Correspondence: Healya2@cardiff.ac.uk

Abstract: The fundamental importance of groundwater for urban drinking water supplies in sub-Saharan Africa is increasingly recognised. However, little is known about the trends in urban groundwater development by individual households and its role in securing safely-managed drinking water supplies. Anecdotal evidence indicates a thriving self-supply movement to exploit groundwater in some urban sub-Saharan African settings, but empirical evidence, or analysis of the benefits and drawbacks, remains sparse. Through a detailed analysis of official datasets for Lagos State, Nigeria we examine the crucial role played by groundwater and, specifically, by household self-supply for domestic water provision. We then set this in the context of Nigeria and of sub-Saharan Africa. One of the novelties of this multi-scalar approach is that it provides a granular understanding from large-scale datasets. Our analysis confirms the importance of non-piped water supplies in meeting current and future drinking water demand by households in parts of sub-Saharan Africa and the role played, through self-supply, by groundwater. Our results demonstrate inconsistencies between datasets, and we make recommendations for the future. We argue that a key actor in the provision of drinking water supplies, the individual household, is largely overlooked by officially reported data, with implications for both policy and practice.

Keywords: self-supply; urban; households; groundwater; drinking water; sub-Saharan Africa; Lagos; low income; packaged water; Joint Monitoring Programme



Citation: Danert, K.; Healy, A. Monitoring Groundwater Use as a Domestic Water Source by Urban Households: Analysis of Data from Lagos State, Nigeria and Sub-Saharan Africa with Implications for Policy and Practice. *Water* **2021**, *13*, 568. <https://doi.org/10.3390/w13040568>

Academic Editor: Pedro Martinez-Santos

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Published: 23 February 2021

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1. Introduction

Sustainable Development Goal 6.1 aims to achieve universal and equitable access to safe and affordable drinking water for all by 2030. To be considered safely managed, water supplies should be located on premises, available when needed and free of faecal and priority chemical contamination [1]. Despite investments, municipal piped water infrastructures struggle to meet burgeoning water demands across much of urban sub-Saharan Africa [2]. Economic growth, increasing urbanisation, and rising urban populations, coupled with growing user demands and industrialisation, is resulting in demands outpacing piped supplies in many towns and cities [3]. This maintains a past pattern of declining access to piped water in cities across Africa [4].

Heterogenous water supply infrastructures compensate for unavailable or intermittent piped public water supplies [5]. The role of water vendors has long been recognised, but households also turn to other non-piped supplies, including commissioning the construction of their own boreholes, both for drinking water and other household uses [6–8]. Where these supplies are located on household premises, they can contribute to securing safely managed water supplies. Demand for packaged water (sachets or bottles), is also rising in the urban areas of many countries [1]. Many of the heterogeneous infrastructures depend on groundwater supplies. Typically described as a ‘hidden’ or ‘invisible’ resource [9–11]

Water **2021**, *13*, 568. <https://doi.org/10.3390/w13040568>

<https://www.mdpi.com/journal/water>

Networking reception

Evaluation & Next Steps

STS Evaluation Form

https://docs.google.com/forms/d/e/1FAIpQLSdg23pHAd8Ee1d10IHejCc1Qcro6AsdRyxK_dJwQRe9ughQcQ/viewform?usp=sf_link



viewform

docs.google.com

TWITTER / LINKEDIN PARTY?

Could we, as one of the ways to keep in touch, have a follow Twitter and/or LinkedIn session so we can also share, repost, etc. our work, and ideas? - Tieza S.

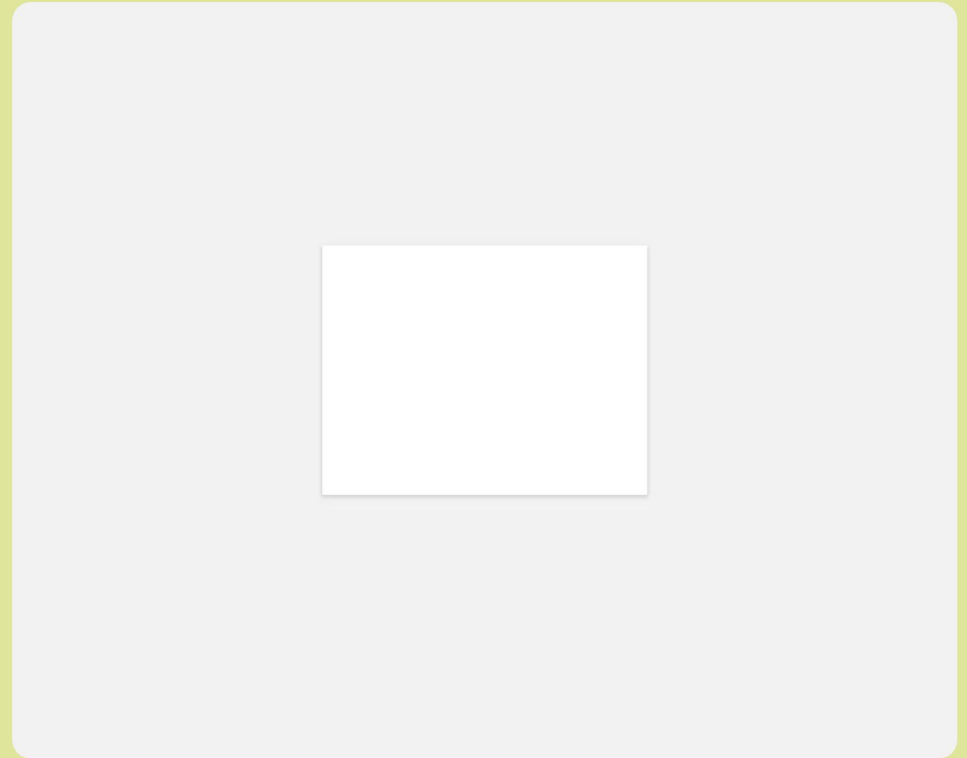
Testimonials and Feedback

Hi folks, we would be so grateful if you could add testimonials or feedback that we could use for our website and impact report. <3



Enjoying the Weather

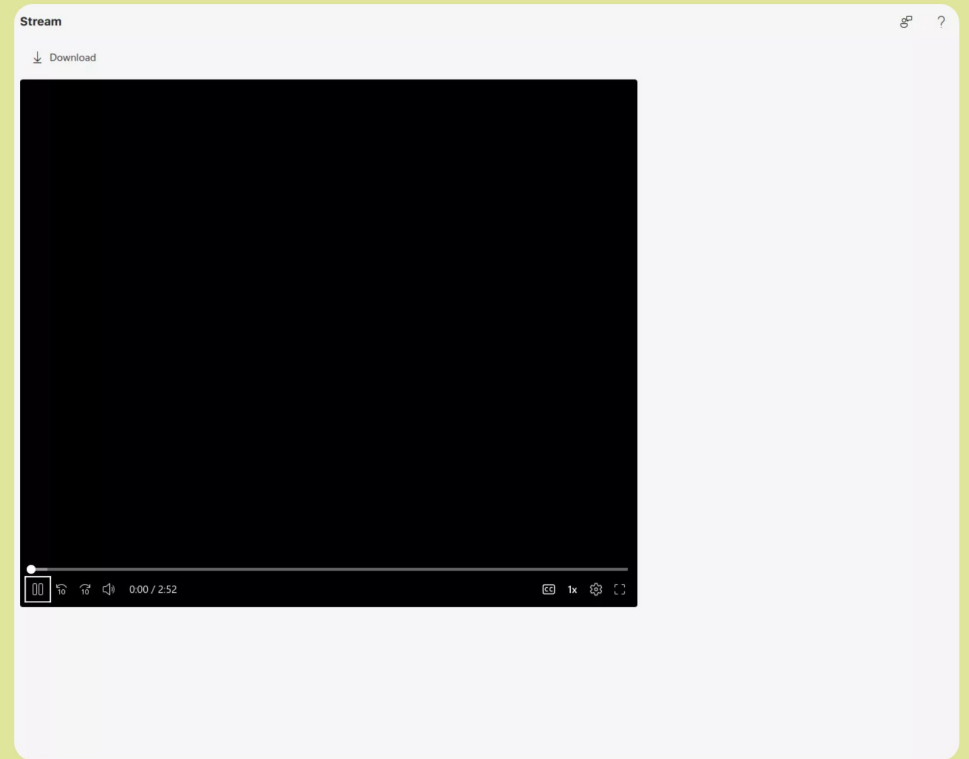
Was in the WISE - Bonus STS Feature - Priceless!!



Sign in to your account

gla-my.sharepoint.com

STS 2.0 Bonus Feature




Sign in to your account

gla-my.sharepoint.com

STS 2.0

Stream

Download



The video player displays a white screen with two logos. On the left is the Warwick logo, featuring a stylized 'W' made of two triangles (one blue, one green) above the text 'WARWICK' and 'INSTITUTE FOR GLOBAL SUSTAINABLE DEVELOPMENT'. To the right of this is the text 'in cooperation with'. On the right is the EUTOPIA logo, featuring a stylized 'E' made of dots above the text 'EUTOPIA' and 'European University'.

0:00 / 4:49

Sign in to your account

gla-my.sharepoint.com

Elena's Photos from the Week

<https://photos.app.goo.gl/ZjFdDz9HonTikgDd7>









Perfect for a walk



All photos - Please keep adding!!!

Please take lots of photos, and upload these to the google drive link.

TITLE	LAST MODIFIED
 day 1 - 15 Apr	Apr 18
 day 2 - 16 Apr	Apr 18
 day 3 - 17 Apr	Apr 18
 day 4 - 18 Apr	Apr 18
 day 5 - 19 Apr	Apr 18
 photos from Elena	Apr 18