

## <u>CLimate University for Virtual EX</u>changes - C L U V E X -

## CLUVEX: Virtual Exchange Weeks for Students

## by CLUVEX Teams







## **Outline:**



- CLUVEX project: Basic info & Partners/Teams & Staff & Aim
- > Online Learning Future of Education?
- > CLUVEX stages in workflow for VEs & Dissemination, Upscaling, Networking
- Virtual Exchange (VE) Week for students approach
- Outlined programme Days 1-5 (Mon-Fri)
- Preparatory materials (VEG, CLG, CMC) pre-task
- > Lectures (1-8)
- > Tools (1-3)
- Work in groups on "Climate Horizon" Exercise
- Learning outcomes
- Earned bonuses for students
- Welcome to Climate University Online Courses
- What you will earn/ have

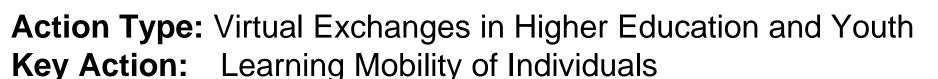








## **CLUVEX: Basic Info & Partners/ Teams**



https://www.atm.helsinki.fi/cluvex

- **Project #:** 101111959
- **EU Grant:** 474.359 €
- **Duration:** 1 Jul 2023 30 Jun 2026



**Coordinator:** Dr. Hanna K. Lappalainen, <u>hanna.k.lappalainen@helsinki.fi</u> University of Helsinki, UH-INAR

Website:

**Partners:** 

- UH University of Helsinki, Finland
- **OSENU** Odessa State Environmental University, Ukraine
- TSNUK Taras Shevchenko National University of Kyiv, Ukraine
- YSU Yerevan State University, Armenia
- UCPH University of Copenhagen, Denmark
- **BioArt** Bioart Society, Finland









## **CLUVEX: Project Staff Members**

















































Full list of CLUVEX participants : <u>https://www.atm.helsinki.fi/cluvex/?page\_id=45</u>









## **CLUVEX: General Aim**



- to bridge students from European and Neighborhood East universities;
- to engage students with climate competences and green agenda together with interdisciplinary, green and soft skills;
- to educate 500 students in 1 Virtual Exchange (VE) Week (5 VE Weeks in total)
- to educate altogether 2500 students as Climate Messengers in 3 years









## **Online Learning - the Future of Education?**



- Concept of traditional education is changing (COVID-19!)
- Being physically present in classroom isn't the only learning option anymore not with the rise of the internet and new technologies, at least.
- Online learning access to a quality education whenever and wherever you want, as long as you can get online
- Challenges of distance learning can be little interaction!
- Virtual Exchange is a tool to increase interaction in distance education!





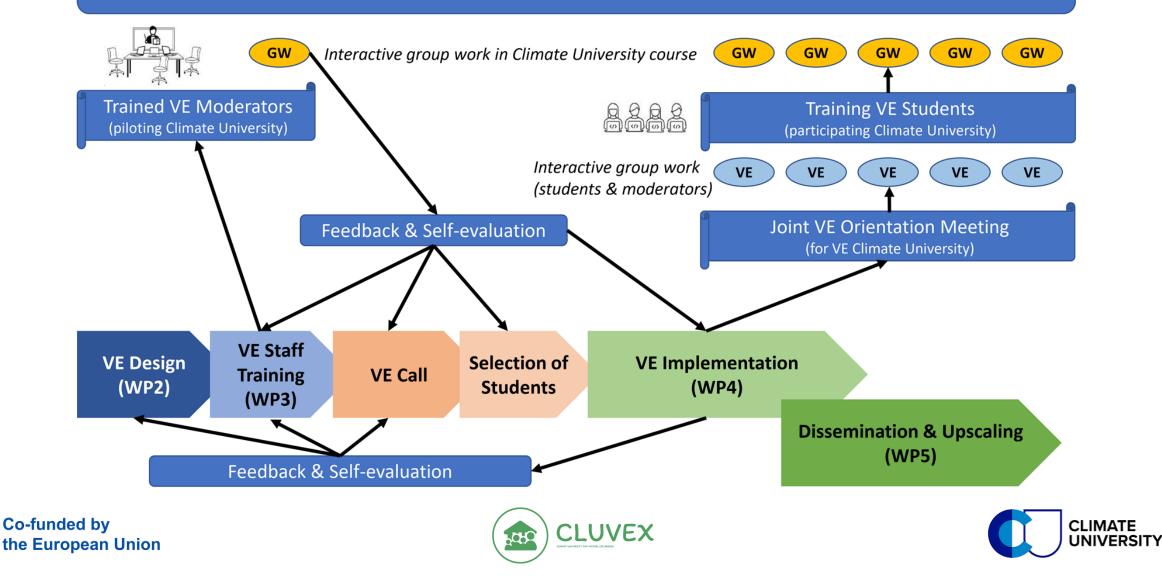




## **CLUVEX stages in workflow for VEs**



#### Climate University Online Courses Running Lectures & Group Work



## **CLUVEX Dissemination, Upscaling, Networking**

#### **Dissemination and Upscaling**

- International Assoc. of Meteorological Education & Sciences
- Air Pollution in the Arctic: Climate, Environment and Societies
- WMO Network of Regional Training Centers
- Pan-Eurasian Experiment
- Digital Belt and Road Program
- Copenhagen Science City

CLUVEX VIRTUAL EXCHANGE

CLUVEX



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- UArctic Network of Universities
- Nordic University Teachers Network
- Climate University Network in Finland
  - Black Sea Universities Network
- INTENSE International Doctoral School Network





## Welcome to act as a CLUVEX Moderator

The VEs organized by CLUVEX project (led by Univ Helsinki) are currently the largest EU VEs project in their field offer a unique opportunity to learn about remote working and teaching in an international environment, and for e.g. doing training work at "Master of Teaching" or on "English language".

- During CLUVEX VE Weeks for students joint sessions with up to 500 students from all CLUVEX Partners' universities and collaborating universities, where networking and interactions in small groups of up to 10 students, plus 1 moderator, will take place.
- Moderators' central role is ONLINE to support and motivate international and interdisciplinary interactions, discussions, and learning in small groups of students.











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## **CLUVEX: Calls for VE Weeks for students**

### **Main Activity**

- To announce 5 VE Calls and organize interactive online trainings called "VE Weeks-for-students" (1 ECTS credit point) in 2024-2026.
- To carry out the VE Weeks online in Zoom with plenary sessions (lectures and demo of tools for analysis of climate related data)+ work in small groups of students discussing specific topics of climate change and working on Individual and Collaborative "Climate Horizon" exercise.
- Small groups in Zoom break-out-rooms are guided by educated CLUVEX moderators
- 1<sup>st</sup> VE Week: 14-18 Oct 2024
- 2<sup>nd</sup> VE Week: 12-16 May 2025



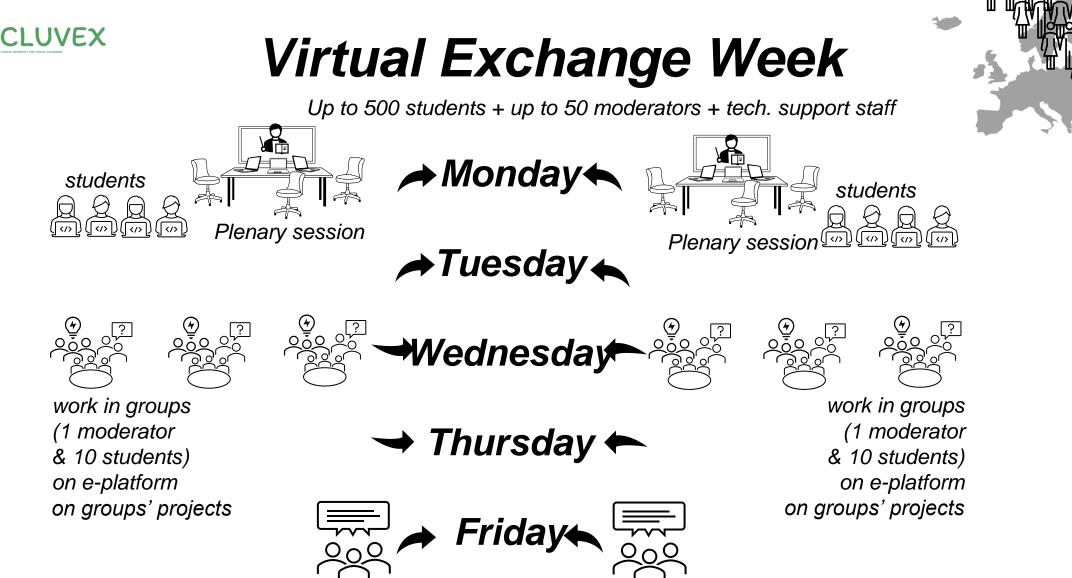








## Virtual Exchange Call for students



Group's projects/ presentations & discussions

Group's projects/ presentations & discussions

Up to 500 students

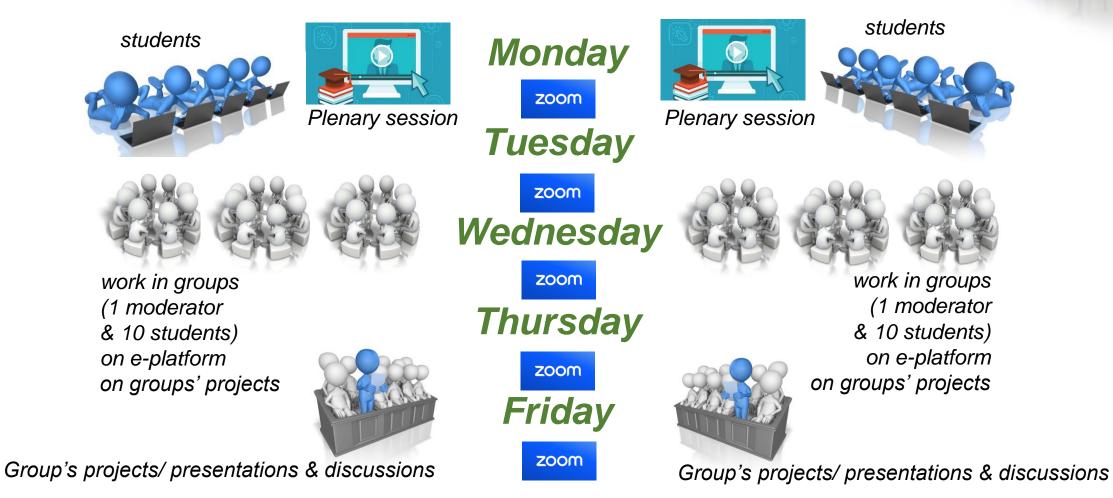
## Virtual Exchange Call for students

500 students



## Virtual Exchange Week

Up to 500 students + up to 50 moderators + tech. support staff



## **VE Week for Students – Outlined Programme**



#### Day 1 (Monday) – 3+ hour

- Welcome words
- Plenary session Lectures 1-8
- Breaking into small groups (moderator + up to 10 students in each group)
- Introduction round & pre-task sharing

#### Day 2 (Tuesday) – 3+ hour

- Tool for Environment and Data Visualization (Past & Present)
- Breaking into same small groups (moderator + up to 10 students in each group)
- Working in groups on "Climate Horizon" Exercise Mapping Past & Present

#### Day 3 (Wednesday) – 3+ hour

- Tool for Socio-Economic Drivers of Climate Change (Past & Future)
- Breaking into same small groups (moderator + up to 10 students in each group)
- Working in same groups on "Climate Horizon" Exercise Mapping Past & Drafting Future

#### Day 4 (Thursday) – 3+ hour

- Tool for Climate Scenarios (Future)
- Breaking into same small groups (moderator + up to 10 students in each group)
- Working in same groups on "Climate Horizon" Exercise Mapping Future

#### Day 5 (Friday) – 3+ hour

- Discussions and sharing by groups own collaborative "Climate Horizon" Exercise
- Questionnaires for students and for moderators

## **Preparatory Materials for VE Weeks**





#### Virtual Exchange Guidebook (VEG)

Lessons learnt from the "Climate University for Virtual Exchanges" (CLUVEX) project in 2023-2026

Version 3.0

#### ERASMUS+ CLUVEX Project Number 101111959

Work Package 02 Deliverable 2.1





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#### **Climate Literacy Guidebook (CLG)**

Reading materials for students participating in the CLUVEX Virtual Exchange Week

#### Version 2.0

#### ERASMUS+ CLUVEX Project Number 101111959

Work Package 02 Deliverable 2.2

20 September 2024

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#### Climate Messenger Code of Conduct (CMC)



Instructions for Virtual Exchange Week participants

Version 2.0

ERASMUS+ CLUVEX Project Number 101111959

Work Package 02 Deliverable 2.3

28th February 2025

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## **VE Week - Lectures**



#### **CLUVEX lectures provide a wider context of the climate change**

#### Lecture #1: Navigating Planetary Boundaries: Our Blueprint for a Sustainable Future

Lecturer: Inna Khomenko, Mechnikov Odessa National University (ONU), Ukraine (UA)

Lecture #2: Climate Change, Disasters, Carbon-neutrality and UN Sustainable Development Goals Lecturer: Alexander Baklanov, Niels Bohr Institute, University of Copenhagen (UCPH), Denmark

#### Lecture #3: Climate Change Impact on Water Resources

Lecturers: Sergiy Snizhko & Olga Shevchenko, T.Schevchenko National University of Kyiv (TSNUK), UA

#### Lecture #4: Nature Hazards - Floods

Lecturer: Valeriya Ovcharuk, Mechnikov Odessa National University (ONU), UA

#### Lecture #5: Impacts of Climate Change and Future Outlook

Lecturer: Hamsik Movseyan, Yerevan State University (YSU), Armenia

#### Lecture #6: Climate Change, Mitigation and Adaptation Strategies

Lecturer: Hasmik Movsesyan, Yerevan State University (YSU), Armenia

#### Lecture #7: Artistic Research and Critical Thinking at the Intersection of Art, Science and Society

Lecturer: Yvonne Billimore, Bioart Society, Finland

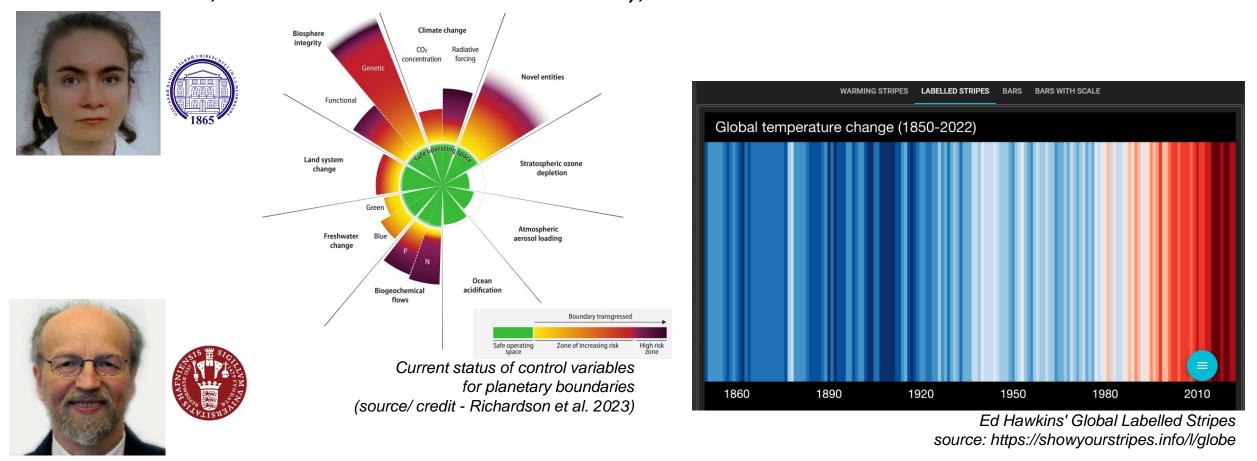
#### Lecture #8: Towards Sustainable Future Utopia

Lecturer: Antti Rajala, University of Helsinki (UH), Finland

## VE Week – Lectures 1 & 2



#### <u>Lecture #1: Navigating Planetary Boundaries: Our Blueprint for a Sustainable Future</u> *Inna Khomenko*, Mechnikov Odessa National University, Ukraine



<u>Lecture #2</u>: Climate Change, Disasters, Carbon-neutrality and UN Sustainable Development Goals Alexander Baklanov, Niels Bohr Institute, University of Copenhagen, Denmark

## VE Week – Lectures 3 & 4

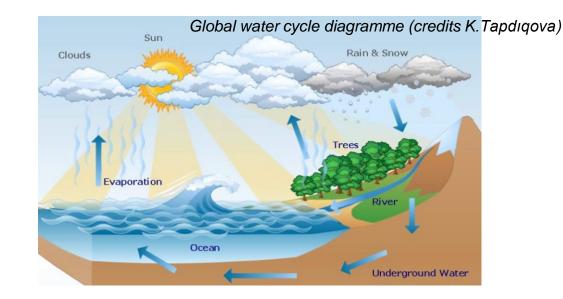


#### **Lecture #3: Climate Change Impact on Water Resources**

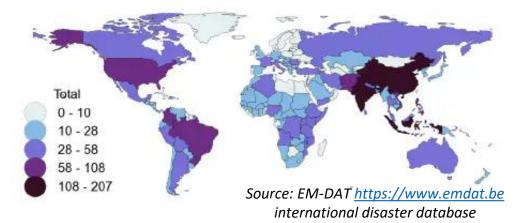
#### Sergiy Snizhko & Olga Shevchenko

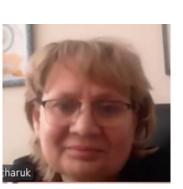


Taras Shevchenko National University of Kyiv Ukraine



#### Flood occurrence per country (2000-2022)





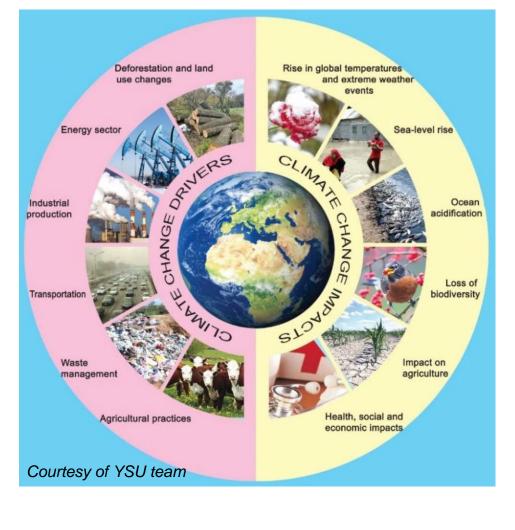
<u>Lecture #4</u>: Nature Hazards – Floods

**Valeriya Ovcharuk** Mechnikov Odessa National University Ukraine



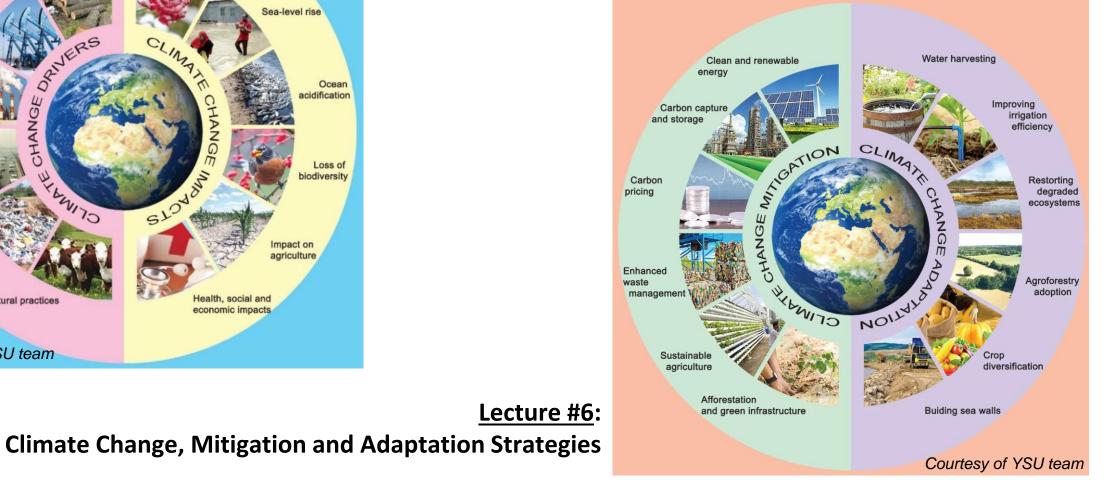
### VE Week – Lectures 5 & 6

#### **Lecture #5: Impacts of Climate Change and Future Outlook**



Hasmik Movsesyan Yerevan State University Armenia





## VE Week – Lectures 7 & 8

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#### Lecture #7: Artistic Research and Critical Thinking at the Intersection of Art, Science and Society





**Yvonne Billimore** Bioart Society Finland



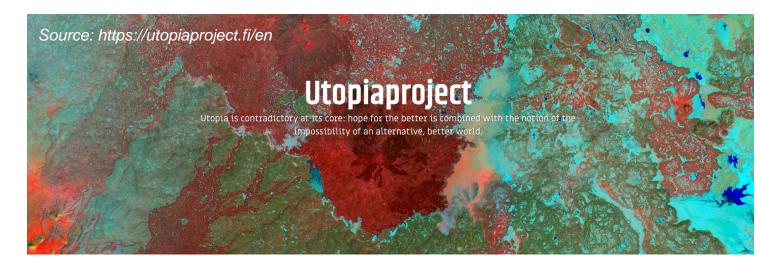
#### **Antti Rajala** University of Helsinki

Finland





<u>Lecture #8</u>: Towards Sustainable Future Utopia





## **VE Week - Tools**

#### User-friendly tools to examinate regions from local to global scales

#### Tool #1 | Past & Present | Environment and Data Visualization

Lecturer: Alexander Mahura, University of Helsinki, Finland ERA-5 Past Climate Explorer (PCE) tool: <u>https://era5.lobelia.earth</u> • Questions for environment/ climate conditions/ society/ pollution ...

#### **Tool #2 | Past & Future | Socio-Economic Drivers of Climate Change**

Lecturer: Stefan Fronzek, Finnish Environment Institute, Finland Shared Socioeconomic Pathways (SSP) Database: <u>https://tntcat.iiasa.ac.at/SspDb</u> Historic Time-Series of Socio-Economic Indicators: https://data.worldbank.org/indicator • Questions for historical/political/social/natural causes that lead into current situation ...

#### Tool #3 | Future | Climate Scenarios

Lecturer: Risto Makkonen, Finnish Meteorological Institute, Finland IPCC Interactive Atlas: <a href="https://interactive-atlas.ipcc.ch">https://interactive-atlas.ipcc.ch</a>

• Questions for historical/political/social/natural causes that lead into current situation ...

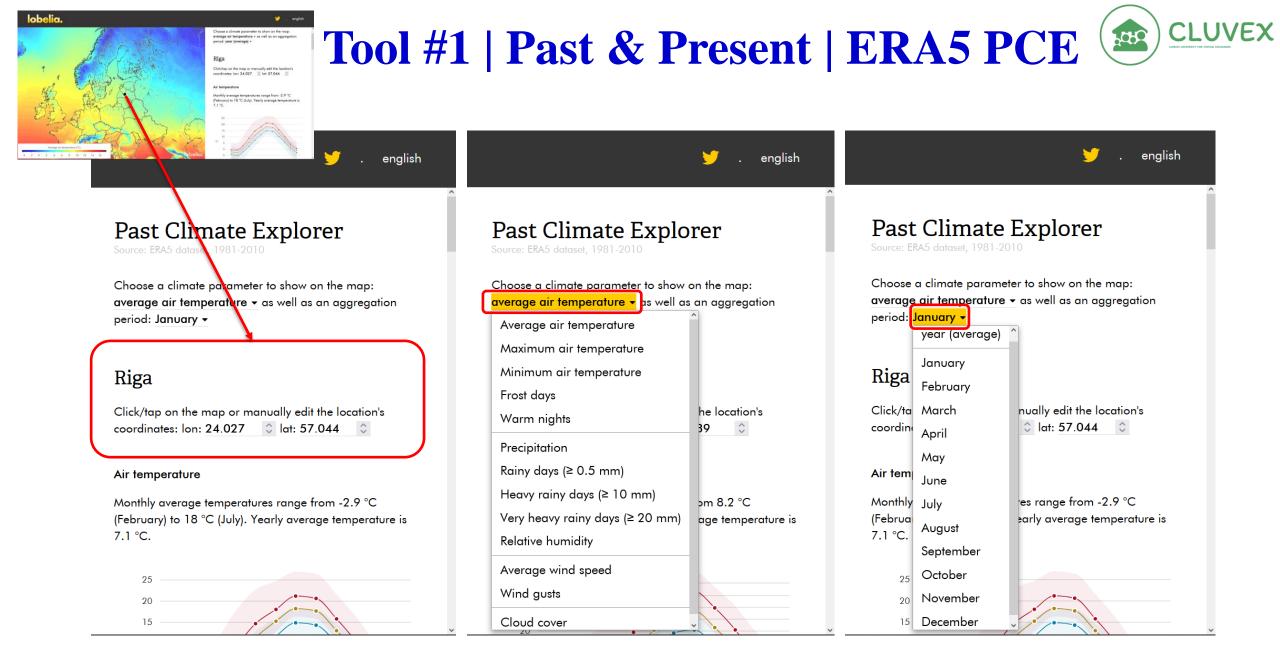


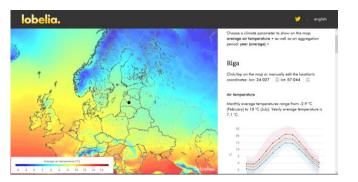




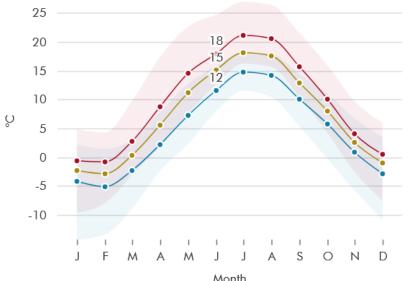
## SYKE







Monthly average temperatures range from -2.9 °C (February) to 18 °C (July). Yearly average temperature is 7.1 °C.



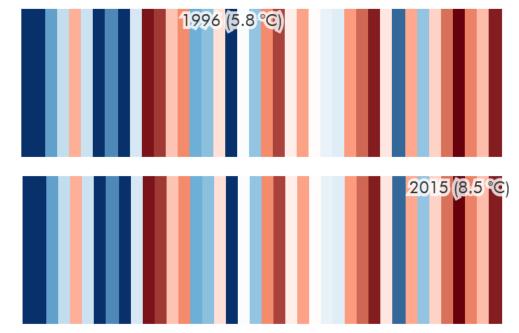


- Monthly average of daily maximum
- Monthly min/max of daily maximum
- Monthly average of daily average
- Monthly average of daily minimum
- Monthly min/max of daily minimum

## **Tool #1 | Application | Riga Air temperature & Warming stripes**

Warming stripes (sometimes referred to as climate stripes, climate timelines) are data visualization graphics that use a series of coloured stripes chronologically ordered to visually portray long-term temperature trends

Warming stripes for the extended period 1979-2018 (what's this?):

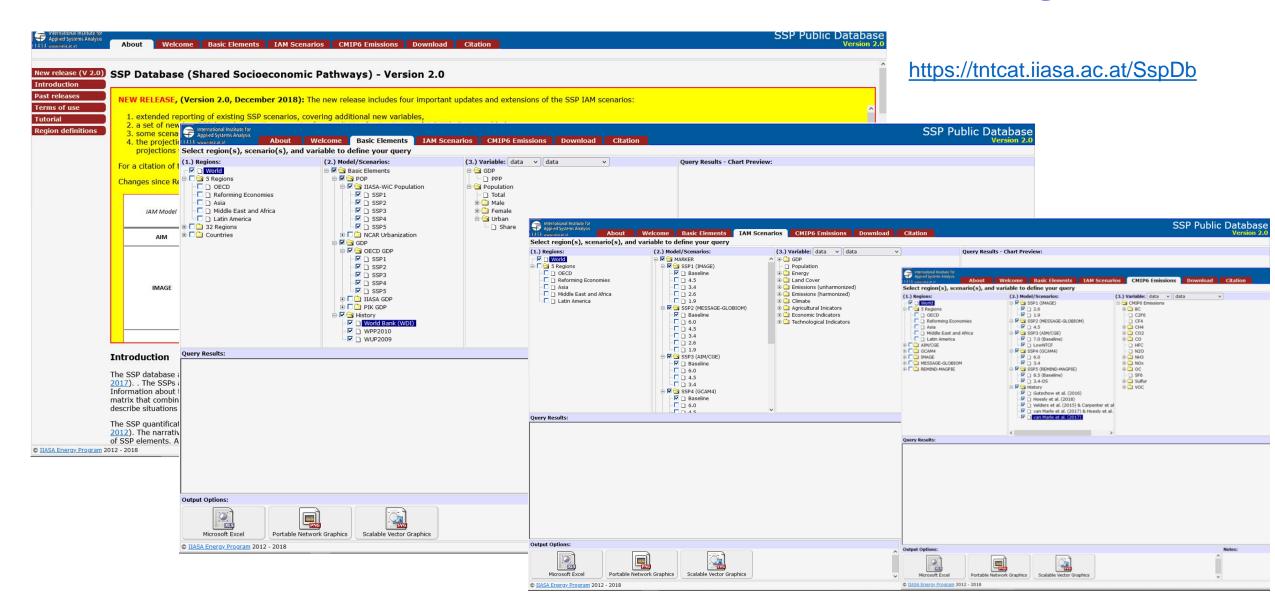


progression from blue (cooler) to red (warmer) stripes portrays annual increases of global average temperature intuitively convey global warming trends to non-scientists.

## Tool #2 | Past & Future | Socio-Economic Drivers of Climate Change

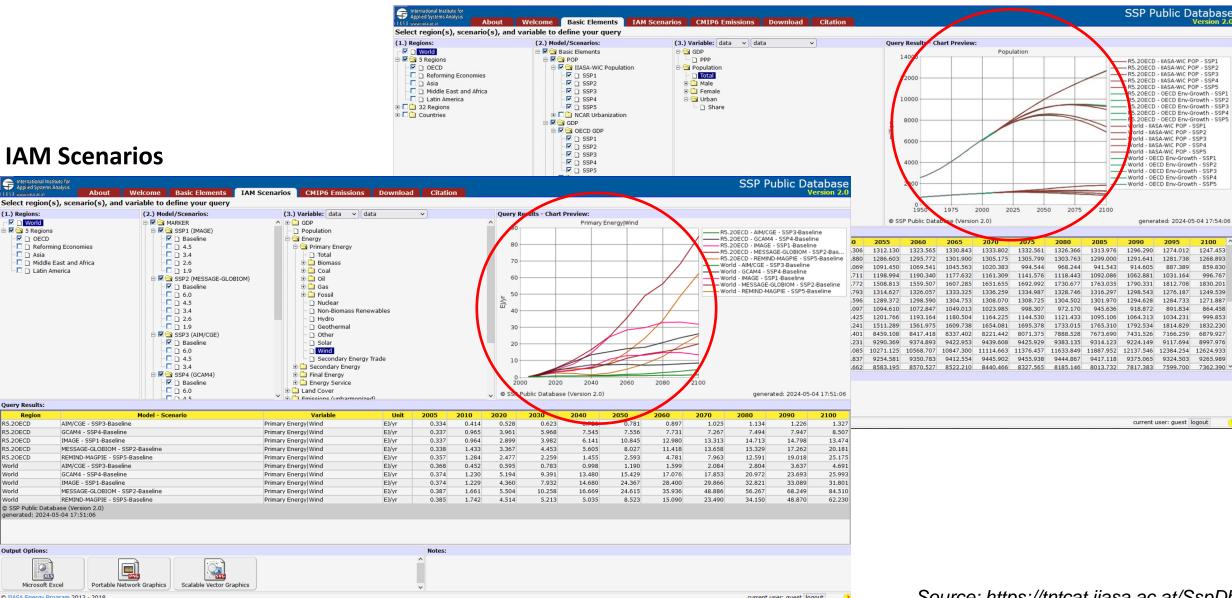
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## **Tool #2 | Shared Socioeconomic Pathways**

**Basic Elements** 



#### IAM Scenarios

Applied Systems Analysis

(1.) Regions:

- 🗹 🗋 World

🛛 🗖 🔂 5 Regions

- 🗖 🗋 Asia

Query Results: Region

R5.20ECD

R5 20ECD

R5.20ECD

**R5 20ECD** 

R5.20ECD

World

World

World

World

World

Output Options

🗖 🗋 Latin America

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PCPC

## **Tool #3 | Future | IPCC Interactive Atlas**





https://interactive-atlas.ipcc.ch

IPCC Working Group I (WGI): Sixth Assessment Report

#### **IPCC WGI Interactive Atlas**

A novel tool for flexible spatial and temporal analyses of much of the observed and projected climate change information underpinning the Working Group I contribution to the Sixth Assessment Report, including regional synthesis for Climatic Impact-Drivers (CIDs).

Participate in the user testing survey  ${\mathscr O}$  Errata and problem reporting  ${f O}$ 

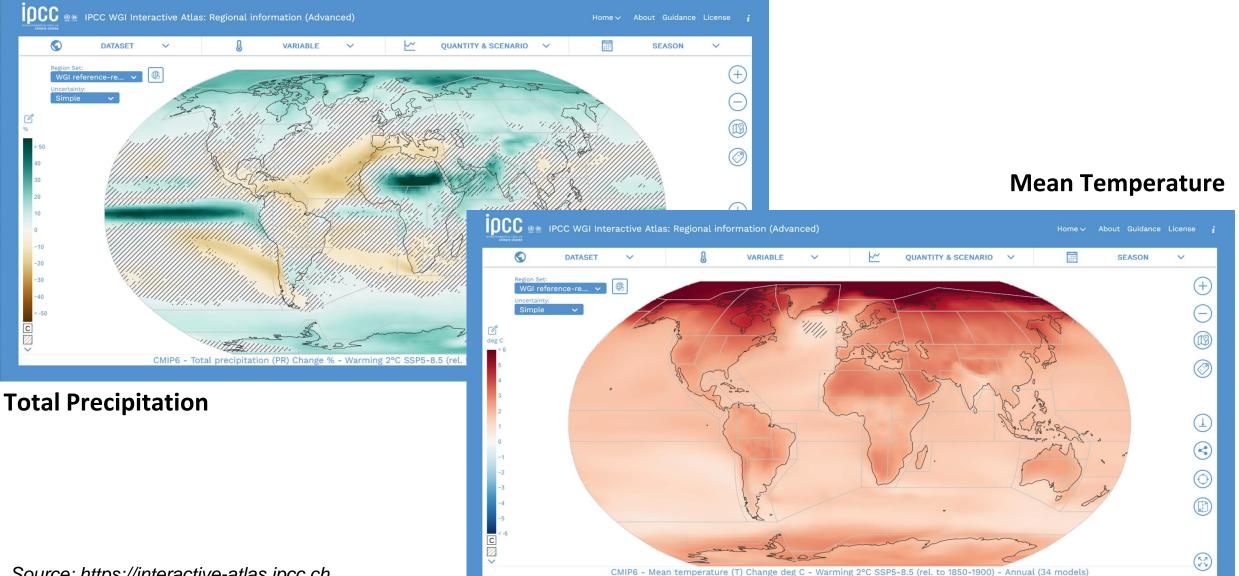




## **Tool #3 | Future | IPCC Interactive Atlas**

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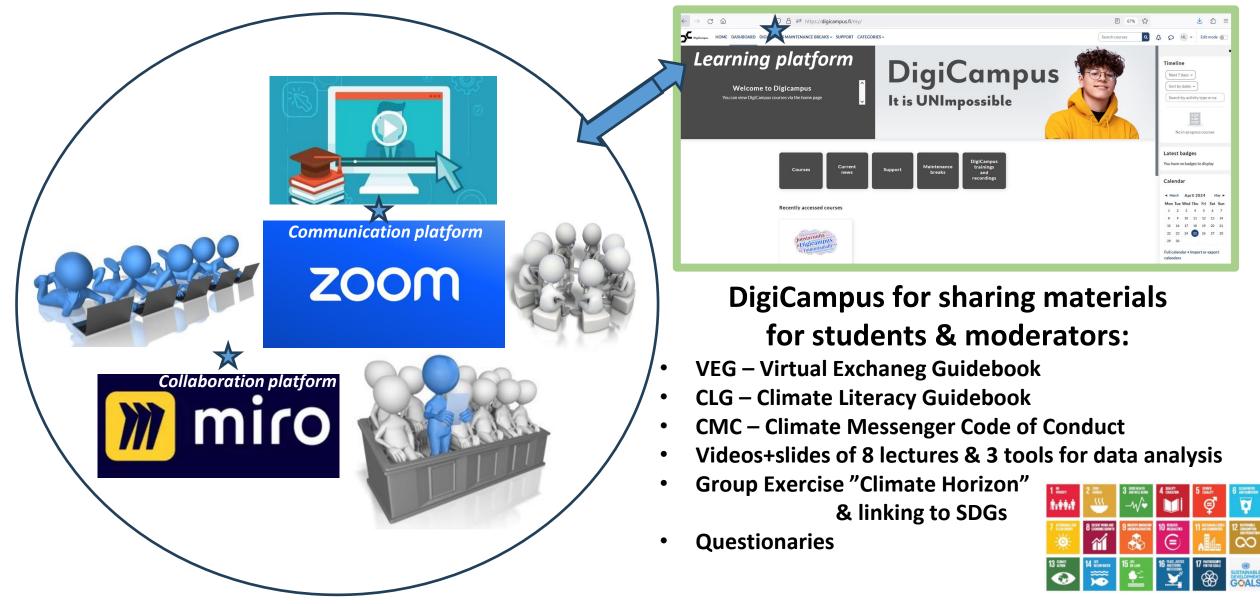


Source: https://interactive-atlas.ipcc.ch

## VE Week – Work in Groups on Climate Horizon

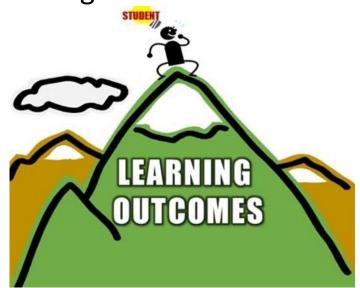
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Learning + Communication + Collaboration Platforms (🛠)



## VE Week – Learning Outcomes /in Certificate/

- Basics of the atmosphere, biosphere, hydrosphere and anthroposphere interaction and feedbacks.
- Basics of climate change based on latest science: Planetary boundaries concept, Last methodological tools used in observing the Earth System.
- •Understanding of the human role from different perspectives like ethical, social, different cultural backgrounds in climate change, adaptation, and mitigation advances.
- Critically reflect owns views on climate change, sustainability, and create new visions.
- Reflect different international and intercultural perspectives on climate change and sustainability.

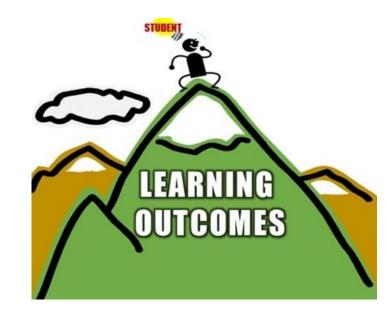


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## VE Week – Learning Outcomes /in Certificate/

- Reflect about global versus local challenges in finding adaptation and mitigation solutions.
- Work together in different online working environments.
- Work and be part of an international teams and manage small joint projects.
- Communicate and present their work in English.
- •Learning basic study skills such as use of open data, literature search, critical reading and thinking.



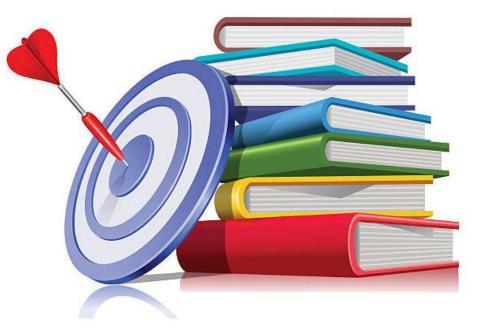
## **VE Week – Earned Bonuses for Students**



## 

## **Students awarded the following:**

- 1 ECTS credit by University of Helsinki
- CLUVEX Certificate
- Status of Climate Messenger
- Welcome to Climate University Online Courses



## Welcome to Climate University Online Courses



**Students** (BSc, MSc, PhD, PostDocs) who paricipated in CLUVEX VE Weeks and became the **Climate Messengers** 

are also encouraged to take the Climate University online courses

https://climateuniversity.fi

CLIMATE UNIVERSITY

## Climate University

- brave forerunner in educating active sustainability makers for the society and business -







## After moderators' training & self-education, you will:



- get the necessary credits from the University of Helsinki (3-5 ECTS),
- get an internship certificate related to your studies,
- try pedagogy and language skills in a national small group,
- learn technical remote working and interaction skills that you will need when you move into working life,
- increase your network with the organizing universities,
- have a unique experience that broadens your world view.

#### Next is tutorial by Aleksi Vauhkonen (UH)



Registration Open University		
UNIVERSITY OF HELSINKI	NEWS $ \checkmark $ Admissions and education $ \lor $ research $ \lor $ innovations and cooperation $ \lor $	ABOUT US Y FACULTIES AND UNITS Y ⊕ EN Y Q;
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Open university	<b>OPEN UNIVERSITY</b>	
Open university studies by de- gree programme		
Open university studies by theme	Be open to new thinking!	පත්
Open online courses or MOOCs	Strengthen your skills or realise your dream to learn something new at the open university.	
Introductory courses	Browse the course catalogue for $\rightarrow$	
Multidisciplinary themed mod- ules	summer courses 2024	
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# Looking forward to see you at the Virtual Exchange Week for Students



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