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DISASTER RISK MANAGEMENT: NEW CHALLENGES FOR THE EDUCATION SYSTEM AND RESEARCH IN ALBANIA AND THE BALKANS

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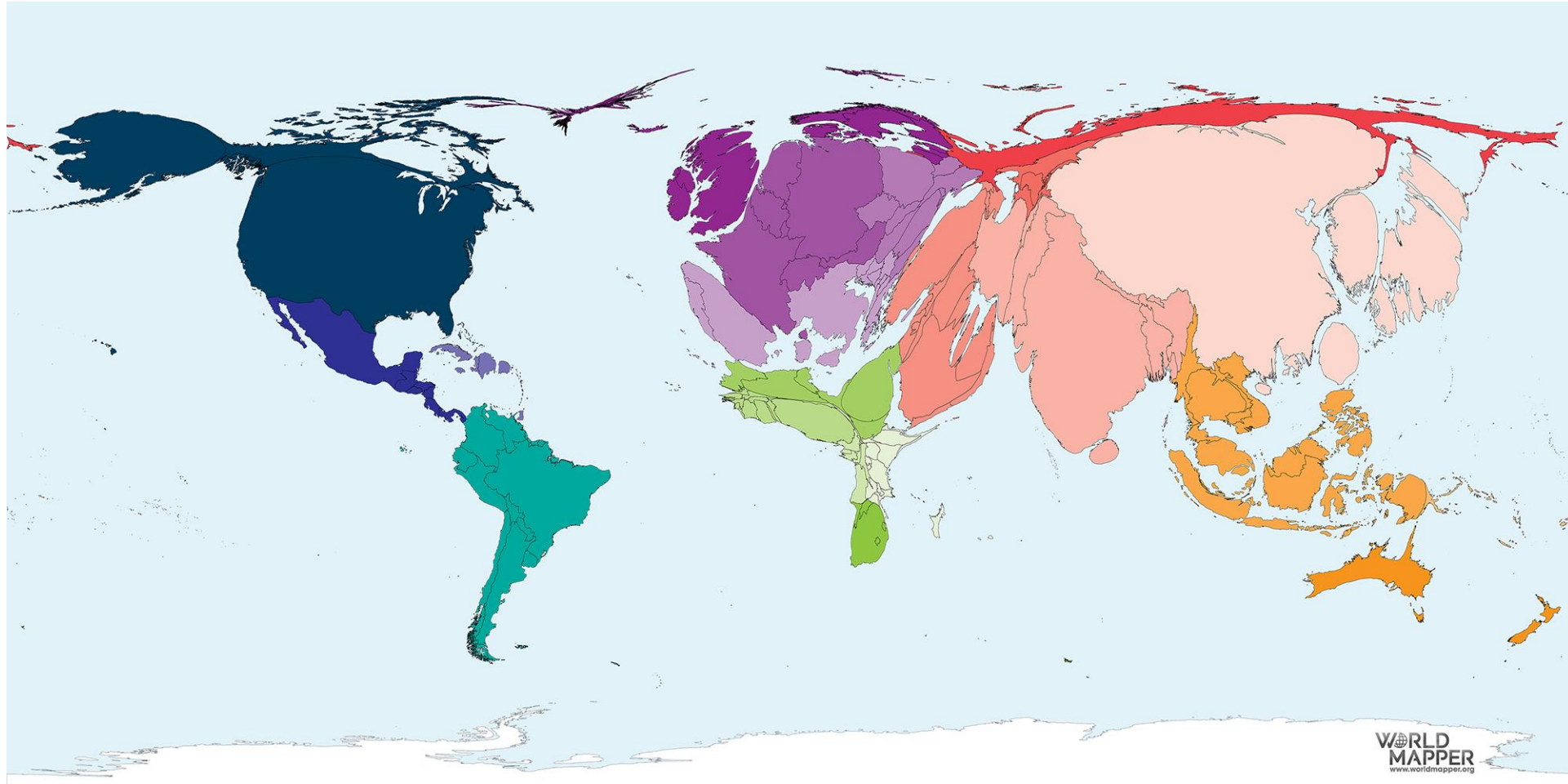
Outline of presentation

- Disasters, poverty and development
- Education and disaster risk management
- Education challenges in the Balkans
- Education challenges in Albania
- Research in the field of DRM

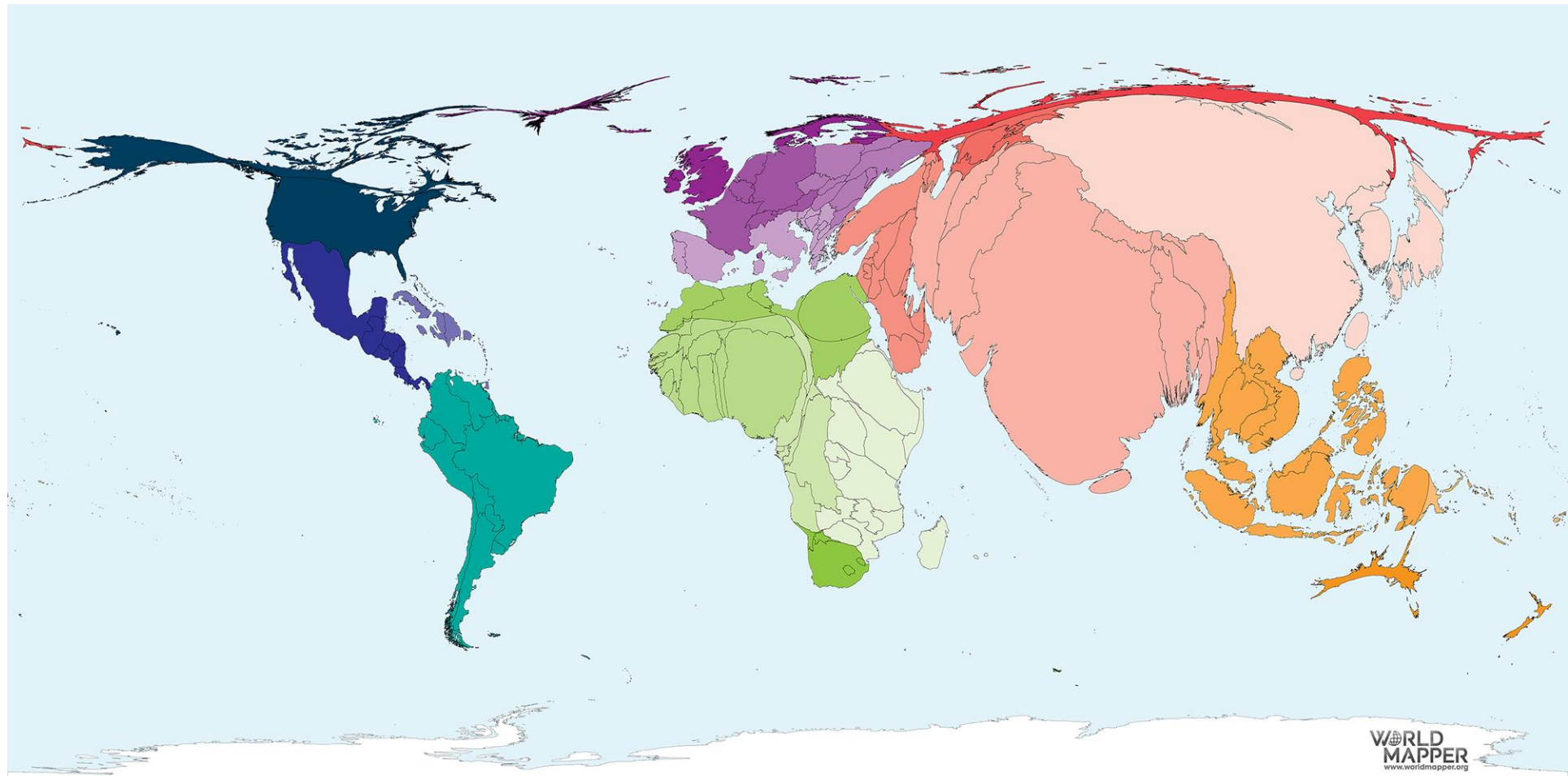
The World map as we know it



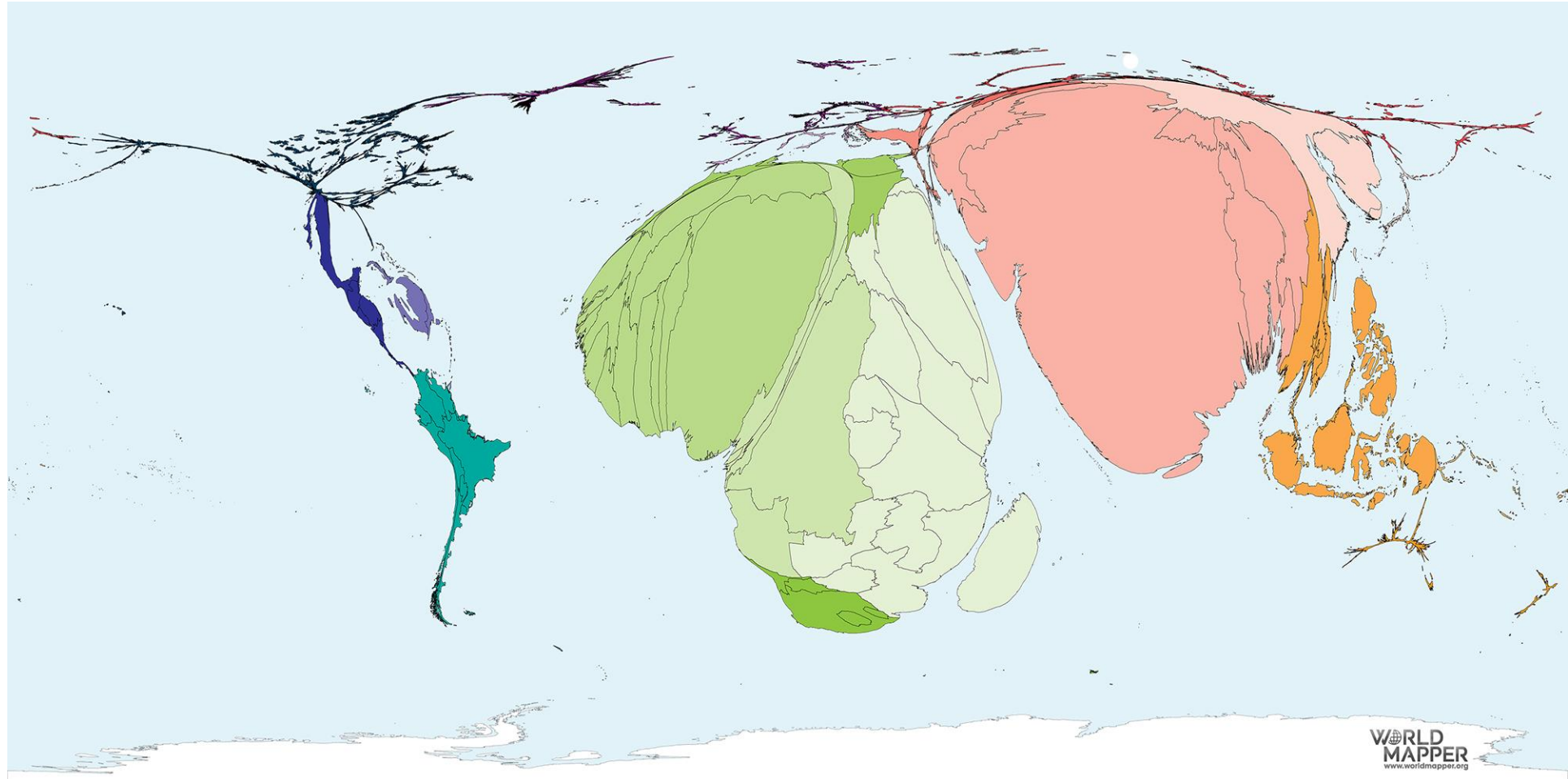
World map based on GDP



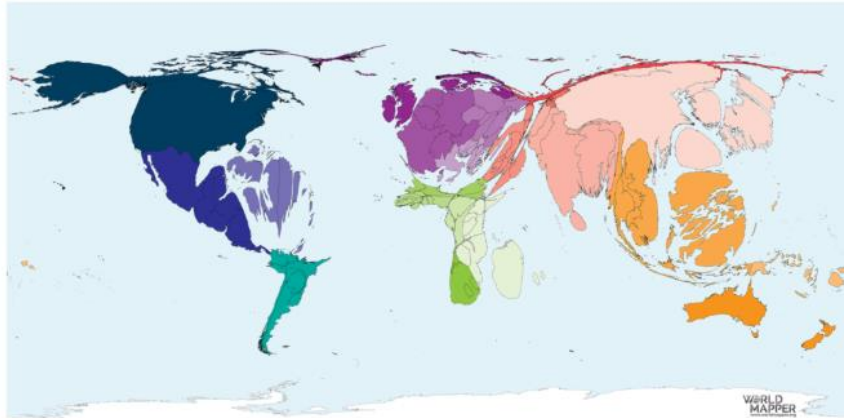
World map based on total population



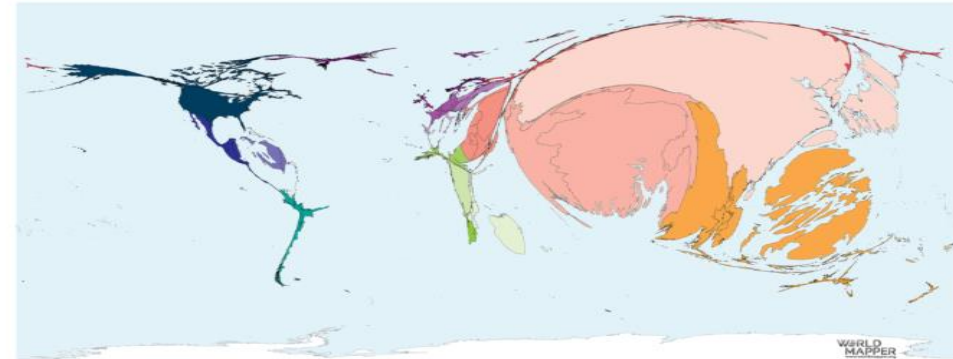
World map based on inequality, absolute poverty



Maps and disasters

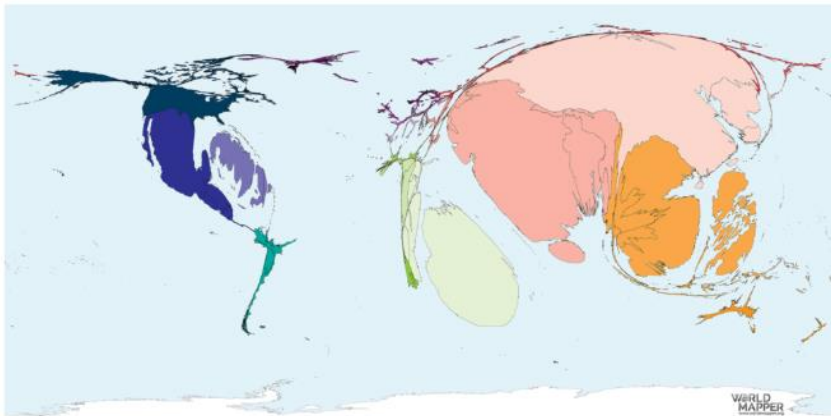


Storms 2000–2017

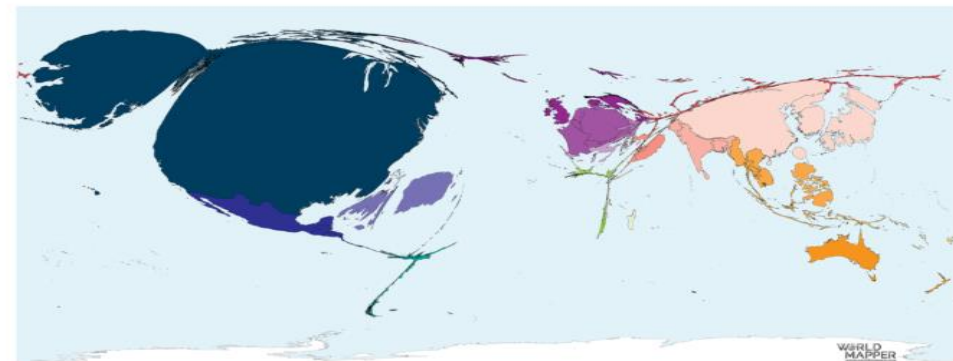


Storm Injured 2000–2017

 Environment

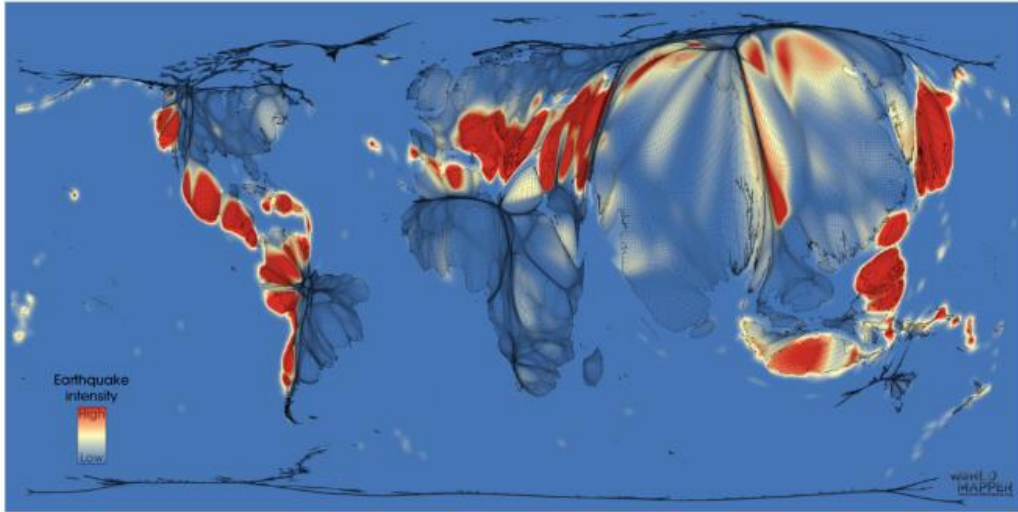


Storms Homeless 2000–2017

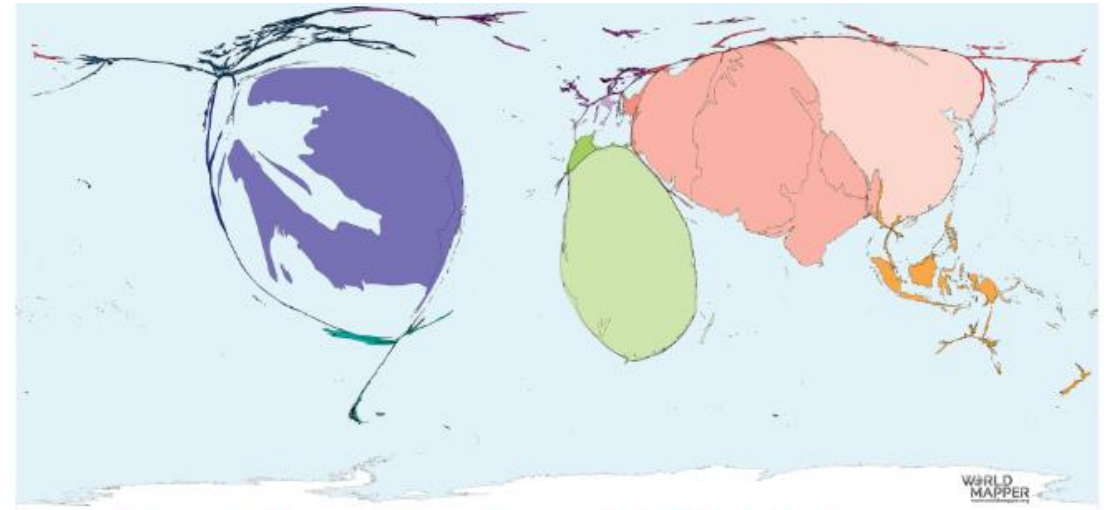


Storm Damages 2000–2017

Maps and disasters



Earthquake risk



Earthquakes Deaths 2001-2017

Education and disaster risk management

- Challenges of education system
 - Supply side challenges
 - Security, enrollment, school interruption
 - Demand side challenges
 - Improving disasters risk and climate change literacy,
 - Addressing teaching and learning methodologies
 - Making university services more sustainable and greener
- Education for sustainable development
 - Increase of adaptive capacities
 - Mainstream development action

DRM education in WB

- Similar background and history
 - Post-communist
 - Bologna process
- Following up with EU studies
 - more than 107 risk education programs
- Interdisciplinary and interfaculty education offerings
 - Traditional approach vs global needs and challenges
- EU assistance
 - International programs, funding, joint action

DRM education in WB

Country	Program	HEI
Serbia	Master programme “Disaster Risk Management and Fire safety”	Faculty of Technical Sciences, University of Novi Sad
	Master programme “Emergency Management”	Faculty of Occupational Safety, University of Niš
North Macedonia	Master in Earthquake Engineering	University Ss. Cyril & Methodius, Skopje Institute of Earthquake Engineering and Engineering Seismology
Bosnia and Herzegovina	Master in Disaster Risk Management and Fire Safety	University of Tuzla
Albania	Master of Science in Risk Management	Faculty of Economy, University of Tirana
	Professional Master Disaster Risk Management and Fire Safety in Civil Engineering	Epoka University

Disasters in Albania

Albania has a high exposure against natural disasters:

- Natural causes (geological, hydrological, atmospheric, biophysical);
 - earthquakes, floods, forest fires, and snowstorms.
- Anthropogenic causes (floods caused because of dams break, intentional fires);
- Other hazards include landslides, drought, epidemics, avalanche, tsunami, technological hazards, dam burst and storms.
- Earthquakes and floods have caused the greatest damages and the largest victims number during the past.
- Available data shows that the risk level is increasing and is comparatively higher in Albania than in neighboring countries
- Albania ranks 41st in the world in terms of vulnerability to landslides, 43rd in terms of earthquakes and 58th in terms of drought risks (Global Assessment Report, UNISDR, 2013)

Disasters in Albania

Natural disasters occurrence in Albania

Nr.	High possibility	Medium possibility	Low possibility	Variable possibility
1.	Fog	Erosion	Earthquake	Avalanche
2.	Hail	Drought	Lightning	Infection of crops
3.	Slide of soil	Flood		Snow storm
4.	Fire in Forest	Ice storm		Wind storm
5.		Intensive rain storm		
6.		Sinking		

Disasters in Albania

The disasters with the greatest number of victims in Albania up to 2019

The disaster	Date	Location	Victims number
Snowfall/extreme temperature	6 March 1985	North	68
Landslide	11 January 1985	North	57
Earthquake	15 April 1979	Shkodra, Lezha	35
Earthquake	30 November 1967	Shupenze	11
Flood	17 November 1992	Kruja, Lac, lezha, Shkodra	11
Earthquake	26 May 1960	Korca	7
Storm	08 January 2002	Shkodra, Dibra, Puka, Kukes	6
Snowfall/extreme temperature	January 2012	North	5

2019...

- On 26th November 2019 at 03:54, a devastating earthquake, with a magnitude of 6.3 on the Richter scale at a depth of 38 km, hit Albania, with epicentre 22 km from Durres and 30 km from Tirana,
- Extensive damage in 11 municipalities
- 202,291 people affected
- 51 fatalities
- 913 injured
- 17,000 people displaced
- 985.1 million EUR damage - 843.9 million EUR the value of destroyed physical assets and 141.2 million EUR losses.
- The strongest in 30 years..

Effects on Education sector

- Damages to 321 educational institutions, representing 24% of all educational establishments.
- Tirana and Durrës have the highest share of damage, 55% and 21% respectively.
- Losses of the sector - 8.76 million EUR (7.5% of all damages)
- The recovery of the Education sector will cost about 95 million EUR or nearly 9% of the total recovery cost

Challenges and needs...

“Existing Governmental and ARC contingency plans in Albania were activated right after the earthquake but they have proven to be incomprehensive and not appropriately implementable. As well, the level, scope or methodology of DRR activities at community and household-level implemented ahead of the disaster appear insufficient – which became apparent in the initial reaction of the population to the events. There is a need to update the contingency plans as part of institutional preparedness and review and scale up community-based DRR activities”

IFRC, 2019

Challenges and needs...

- Needs for professionals trained in the field of disaster risk management
- Needs for awareness raising
- Needs for sustainable building design
- Needs for international assistance

DRM education in Albania

- In 2017 a new program of study based on a newly developed curricula started to be implemented by the Department of Finance, Faculty of Economy UT: Master of Science in Risk Management:
- Characteristics:
 - Interdisciplinary: Enterprise Risk Management; Financial Risk Management; Disaster Risk Management
 - International cooperation – developed in the framework of the Kforce project under the Erasmus + program
 - Interfaculty – joint lectures developed with project partners
 - Scientific nature – typology of courses
 - First program of this nature in Albania

Development of content and focus

- Students survey (conducted in 2017) addressing demand and needs from students community
- Similar programs offered in EU
- Market study and Expert consultation
 - Regional Environment Center
 - General Directorate of Civil Emergencies in Albania
 - Ministry of Agriculture and Water Administration, General Inspectorate of Water, Municipality of Tirana
 - UNDP Climate change Program in Albania, Institute of Water research in Albania, IBECA project in Albania, GIS
 - Albanian Financial Supervisory Authority representatives -

Novelty in content

- **Disaster Risk Management** – examining the various phases of disaster management: prevention, preparedness, response and recovery.
- **Climate Change Adaption** – assessing important issues regarding climate change adaptation and mitigation policies
- **Disaster risk modeling** – focusing and including GIS knowledge and practice

Research process and research tools

- Research definition: systematic, purpose, facts
- Philosophy of research: Positivism vs Interpretivism
- Types of research: descriptive, exploratory, explanatory, Classification / correlational
- Research choices: mono-methods vs multi-methods
- Research strategies that can be used in a research process are: experiment; survey; case study; grounded theory; ethnography; archival research.

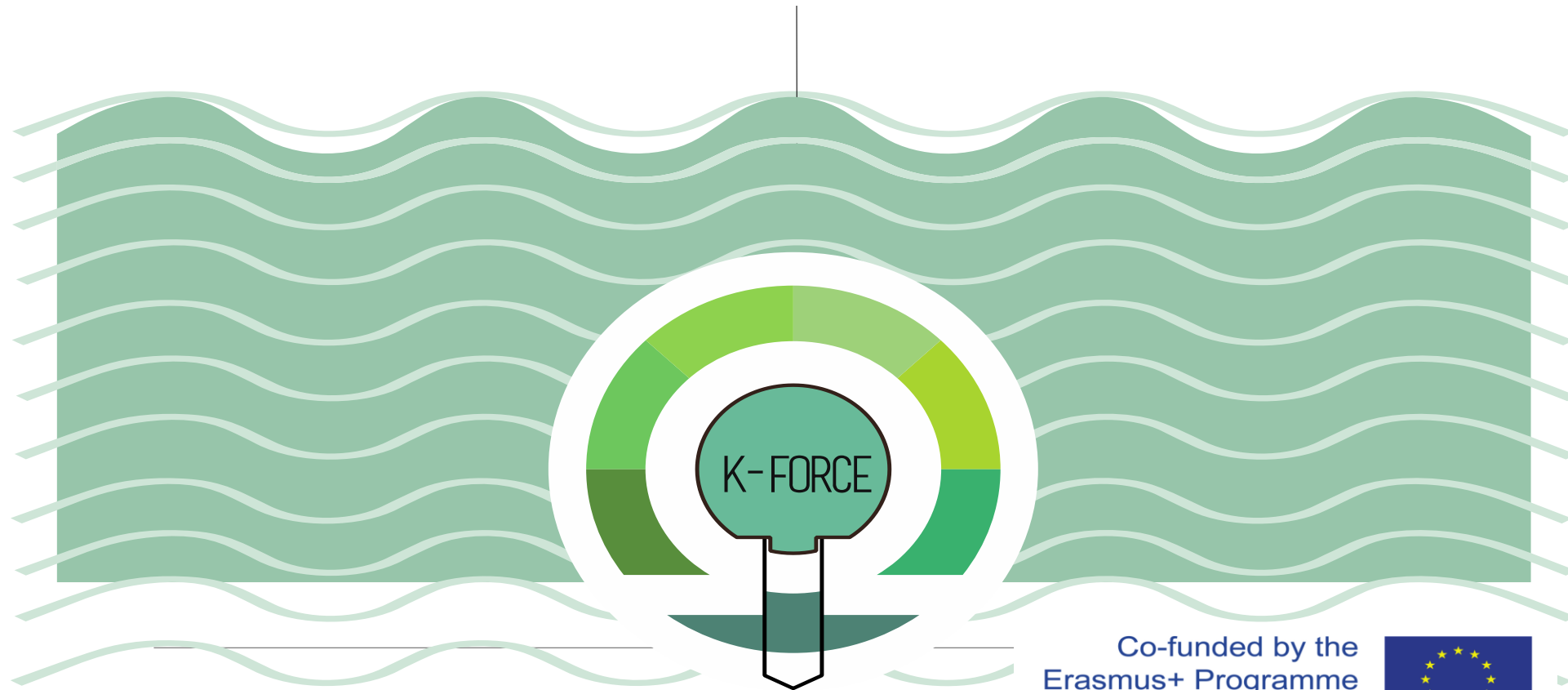
Research challenges in DRM field

- “Methods of Disaster Research” edited by Robert Stallings and “Methodologies of contemporary disaster resilience research” article by Emly Witt and Irene Lill.
- Qualitative approaches dominate over quantitative approaches with relatively few mixed methods studies in evidence
- Preference for positivist as opposed to interpretivist philosophy, which favours quantitative research.
- Data collection: primarily from literature (academic, policy and technical documentation) and from interviews.
- Questionnaires and field observations commonly utilised.
- Case study research particularly common
- No trend identifiable to judge research evolution
- Few use of recently emerging possibilities for research such as open data, satellite imagery and social network analysis suggesting opportunities for innovation and improvement in applying the latest technologies and developments to DRM research.



Choices and Strategies of research in DRM field

- Research Choice
 - Qualitative vs Quantitative
 - Multi and Mixed Methods
- Research Strategy
 - Survey
 - Case study research
- Data collection
 - Questionnaires
 - Interviews
 - Secondary data
 - Observation
- Topics:
 - Multidisciplinary
 - Technical impact
 - Economic impact
 - Behavior
 - Local/Regional/International
- Research Objectives
 - Research around objects
 - Research around people
 - Comparative research
- Research Output
 - Recommendations
 - Public policies
 - Risk communication
- Research tools
 - Comparative research
 - Cost Benefit analysis
 - Technical analysis
 - Financial analysis
 - Decision making



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Thank you
for your attention

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Knowledge FOR Resilient soCiEty