



IAG/AIG Working Group
on Denudation and Environmental Changes
in Different Morphoclimatic Zones (DENUCHANGE)



Association
of Polish Geomorphologists



Institute of Geoecology and Geoinformation
Adam Mickiewicz University in Poznań
Poland

1st Workshop
of the IAG/AIG Working Group DENUCHANGE:
Denudation and Environmental Changes in Different Morphoclimatic Zones
Storkowo-Szczecinek (Poland), September 25-27, 2018

There is general agreement that global environmental changes will have significant effects on Earth surface systems. The question how global environmental changes will affect our landscapes and the way we interact with it is therefore of highest importance. Denudation, including both chemical and mechanical processes, is of high relevance for Earth surface and landscape development and the transfer of solutes, nutrients and sediments from headwater system through main stem of drainage basin systems to the world oceans. Denudation is controlled by a range of environmental drivers and can be significantly affected by human activity.

The better understanding of possible effects of ongoing and accelerated environmental changes on present-day denudation requires systematic and quantitative studies (environmental monitoring) on the actual drivers of denudational processes in differentiated landscape controls. Only if we have an improved knowledge of drivers, mechanisms and rates of contemporary denudational processes across a range of different selected climatic environments, possible effects of global environmental changes on denudation can be better assessed. Special focus must be given to selected morphoclimatic zones that react particularly sensitive to ongoing climatic changes and human activities.

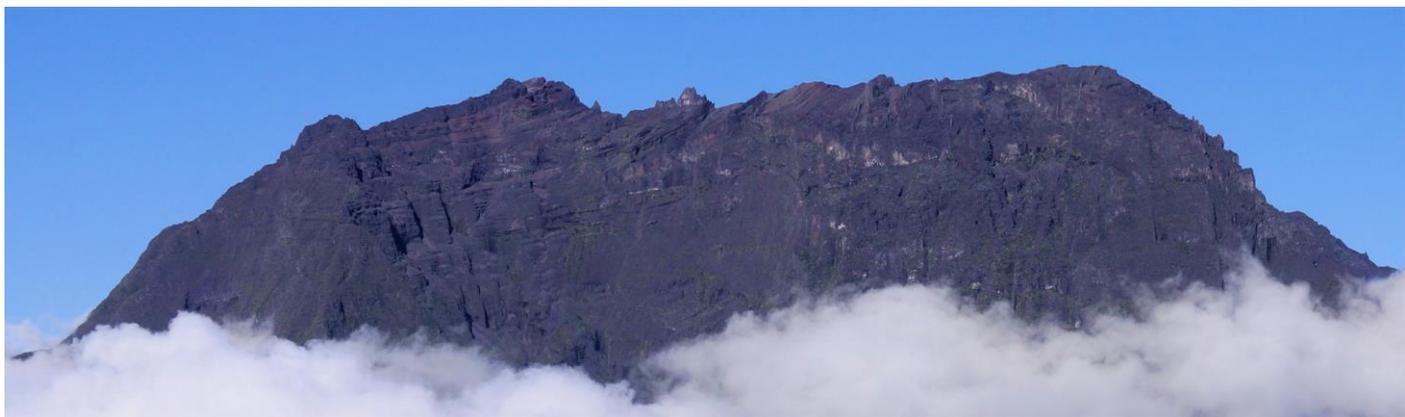
A systematic geomorphologic comparison of present-day denudation rates in different defined climatic zones combined with a coordinated analysis and compilation of the respective key controls of denudation that is presently occurring in the different selected morphoclimatic settings is still largely missing.

The working group on *Denudation and Environmental Changes in Different Morphoclimatic Zones (DENUCHANGE) (2017 – 2021)* will help to close this still existing key knowledge gap and shall contribute to a better understanding of the possible effects of global environmental changes on contemporary Earth surface systems.

The main aims and objectives of the working group are to:

- Define and select a range of different morphoclimatic zones that react particularly sensitive to ongoing climate change and human activities;
- Provide a systematic quantitative analysis (detailed compilation and comparison) of chemical and mechanical denudation rates in defined drainage basin systems in these different selected morphoclimatic zones worldwide;
- Provide a coordinated and integrated analysis and compilation of the respective key drivers of contemporary denudation occurring under the various present-day morphoclimates;
- Define and develop denudational models for different spatial scales of drainage basins and morphoclimatic zones;
- Define the morphometric signature of denudational processes for different spatial scales of drainage basins and morphoclimatic zones;
- Address the key question how climate changes are affecting contemporary denudation rates in different morphoclimatic zones;
- Address the key question how human activity is affecting contemporary denudation rates in different morphoclimatic zones.



**Scientific Committee:**

Achim A. Beylich (NO), Piotr Cieniala (US), John Dixon (US), Jasper Knight (SA), Andrzej Kostrzewski (PL), Katja Laute (NO), Luca Mao (CL), David Morche (DE), Marta Della Seta (IT), Zbigniew Zwoliński (PL).

Framework:

Day 0 (September 24, MON): arrival in Szczecinek (airports in Poznań or Goleniów) and icebreaker

Day 1 (September 25, TUE):

AM – introductory meeting and discussion of the WG (themes, matters, methods, basics, plans, informal meeting etc.) – keynotes:

Achim A. Beylich – The new I.A.G./A.I.G. Working Group on Denudation and Environmental Changes in Different Morphoclimatic Zones (DENUCHANGE): Scientific need, key research questions and planned activities

Olav Slaymaker – A global perspective on denudation rates: complexity compounded by contemporary anthropogenic and climatic changes

PM – invited lectures:

Zbigniew Zwoliński – The pattern of morphoclimatic zones on the Earth

Wiesława E. Krawczyk – Calculation the rate of chemical denudation

Adam Łajczak – Mechanical denudation in Poland

Małgorzata Mazurek – Fluxes in tropical rivers

Day 2 (September 26, WED):

AM – half-day field trip around the upper Parsęta River catchment (fluvial denudational processes) and experimental catchment (soil/slope erosion) – Andrzej Kostrzewski, Mikołaj Majewski, Małgorzata Mazurek, Alfred Stach, Grażyna Szpikowska, Józef Szpikowski, Zbigniew Zwoliński

PM – presentations and posters by participants

Day 3 (September 27, THU):

AM – workshop: denudation modelling with SWAT – Joanna Gudowicz, Anna Dmowska

PM – presentations and posters by participants

general discussion – Achim A. Beylich

Day 4 (September 28, FRI): departure from Szczecinek

Organizers: International Association of Geomorphologists, Adam Mickiewicz University in Poznań, Association of Polish Geomorphologists

Organizing Committee: Achim A. Beylich, Joanna Gudowicz, Mikołaj Majewski, Małgorzata Mazurek, Józef Szpikowski, Marcin Winowski, Zbigniew Zwoliński

Venue: Szczecinek – accommodation in hotel arranged by the organizers; Storkowo – presentation and poster sessions and field trip will be in the area of the Geocological Station of the Adam Mickiewicz University in Poznań

Fees (accommodation, lunches, dinners, workshop materials):

Before July 31, 2018 – 300 €

After July 31, 2018 – 400 €

Deadlines:

First intention – May 31, 2018

Early registration and abstracts – July 31, 2018

Late registration – August 31, 2018

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