

Please note:

This English translation of the „Baustein Erosion“ is a service provided by the *Sustainicum team*. Currently, it has not been approved by the authors.

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IMPLEMENTATION

Erosion

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Basic idea of the building block.

This building block deals with the topic of erosion, particularly soil erosion through water.

The building block is comprised of the following elements:

- Instructional video: Mini Flume
- Optional: Execution of mini flume trial at [IHLW](#) upon request
- Calculation template for analyzing the mini flume trial
- Accompanying material: Presentation documents and instructions for implementation

Aha-Effect for students

The combination of theory (expert input on erosion, film) and application (laboratory experiment, calculation, analysis) allows students a broad insight into the topic. Achieved through this is awareness for the significance and possibilities of erosion control. This understanding is essential to the sustainable protection of soil as a resource.

The topic of sustainability

Soil erosion is a natural process, which is intensified by human activities and impacts nearly all soil functions. As a consequence of climate change the danger of soil erosion through water will increase in around 80 % of arable land in the EU by 2050 (EEA, 2002). The productivity of soil should therefore be protected and as to the extent possible, restored, insuring that the use rate of this resource should not overtake its regeneration rate.

Application during the course

The prepared presentation materials contain a comprehensive expert input on the topic as well as an introduction conducting and analyzing the mini flume experiment.

The presenter may adjust the presentation to meet individual needs.



Time Plan:

Slide	Contents	Time	Comments
1	Title slide		
2	Soil erosion- Introduction	3 min	
3-4	Erosion occurrences	3-5 min	
5-7	Soil erosion through water	5-7 min	Preparation for demonstration and subsequent conduction of experiment
8-9	Mini flume and estimation of soil loss	5-7 min	Optionally further resources (see links) can be brought in at this point. Time necessary depends on target group.
10-11	Erosion protection measures in agriculture	5 min	
12-16	Erosion measurements	10 min	
17	Resources and information	1 min	
18-23	Mini Flume laboratory experiment	10 min	
24	Mini Flume film	3 min	To start the film click “play” or play the film separately
25-27	Mini Flume analysis	10-15 min	Excel-spreadsheet in accompanying material (10-15 minutes are needed for the calculations, which are not calculated into this agenda.)
28-30	Summary and discussion	10-15 min	Discussion and follow- up
31	Conclusion slide	at least 10 min	