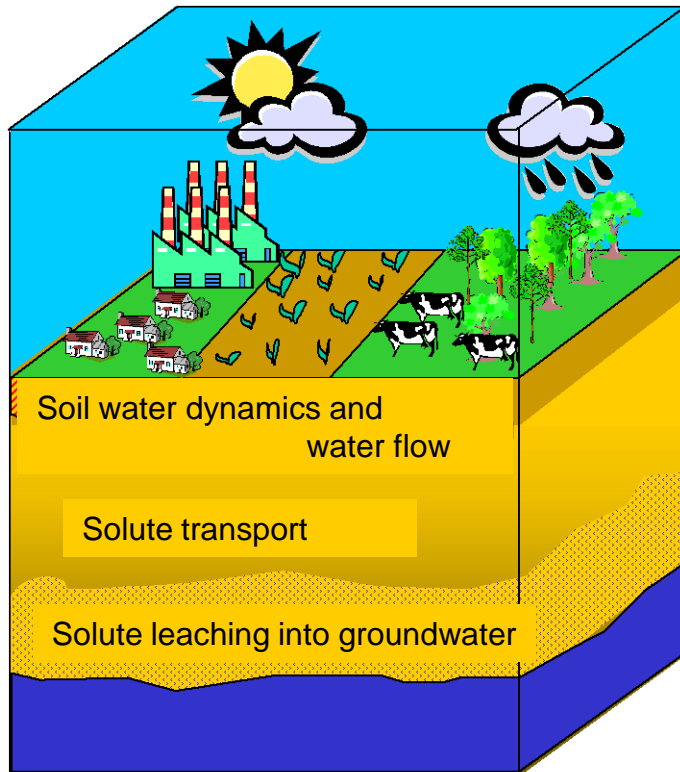


2012

Introduction

Water, Soils and Vegetation: Part 2: Soils and Environment



Topics:

- Introduction to soil science
- Water dynamics in soils
- Areal water balance
- Solute transport in soils
- Solute leaching to groundwater
- Modeling of soil water dynamics and solute transport

2012:

- Lectures: 12.04.-12.07.
Thursday 15.45 - 17.00 Uhr
- Field trip (ca. 5 h): 28.06.2012

- BGR
- Documentation

Documentation

Lectures Soils and Environment

1.Overheads:

Lecture_Soil+Environ_T0_2012.pdf
Lecture_Soil+Environ_T1_2012.pdf
Lecture_Soil+Environ_T2_2012.pdf
Lecture_Soil+Environ_T3_2012.pdf
Lecture_Soil+Environ_T4_2012.pdf
Lecture_Soil+Environ_T5_2012.pdf

Intro soil science
Soil water
Soil water balance + TUB-BGR
Exercise TUB-BGR
Solute transport
N-Leaching

Stud.IP

eMail-adresse:	wilhelmus.duijnisveld@bgr.de
Tel.	0511/6432810 (work) 0160/97306264 (excursion)

2. Exercises + Publications + Method/Pedotransfer rules and functions :

- Exercise TUB-BGR-Example_ausgef.xls
- Duijnsveld, W.H.M, J. Böttcher and co-workers (2010): : Qualitative groundwater problems in the Fuhrberger Feld. Excursion guide to the field trip
- Duynsveld, W.H.M., O. Strebel and J. Böttcher (1988): Are nitrate leaching from arable land and nitrate pollution of ground-water avoidable? Ecological Bulletins 39: 116-125, Copenhagen
- Wessolek, G., W.H.M. Duijnsveld und S. Trinks (2008): Hydro-pedotransfer functions (HPTFs) for predicting the annual percolation rate on a regional scale. Journal of Hydrology, 356: 17-27
- Pedotransfer rules and functions:
 - Pedotransfer rule (Method) 4.6 : TUB-BGR-Verfahren
 - Pedotransfer functions: 4.1, 4.11, 4.12, 1.1, 1.16, 1.17
from <http://www.bgr.bund.de/DE/Themen/Boden/Informationsgrundlagen/methodenbank.html>

3. Literature :

- Bohne, K. (2005): An Introduction into applied soil hydrology. Catena, Reiskirchen. 231 p. (Lecture notes in GeoEcology); pp. 16-76, 96-125, 166-190
- Jury, W.A., W.R. Gardner, and W.H. Gardner (1991): Soil Physics. John Wiley & Sons New York 328 p. ; pp. 218-267
- Bridges, E.M. (1997): World Soils. 3. Edition. Cambridge University Press, pp. 1-43
- McLaren, R.G. & K.C. Cameron (1996): Soil Science. Oxford University Press, Oxford. pp. 1- 27.
- Simmers, I. (2003, ed): Understanding Water in a Dry Environment - Hydrological Processes in Arid and Semi-arid Zones. Balkema, Lisse, 353 pp., ISBN: 90 5809 618 1; pp. 65-114
- Allen, R.G., L.S. Pereira, D. Raes & M. Smith (1998): Crop evapotranspiration (guidelines for computing crop water requirements). FAO Irrigation and Drainage Paper No. 56. 300 pp. pp. 1-28
<http://www.fao.org/docrep/x0490e/x0490e00.htm>

Excursion to the „Fuhrberger Feld“

Time: Thursday, **28. June 2012 14.45** at Meeting Point in the Fuhrberger Feld

How do I get there: Public Transportation

Timetable in 2012:

Train :

Leaving 13.40 Hbf-Hannover
Arrival 13.56 Großburgwedel

Bus 651: (inform the bus driver!!)

Leaving 14.03 direction Fuhrberg
Arrival 14.16 Bus stop Fuhrberg
-Tiefenbruchstraße

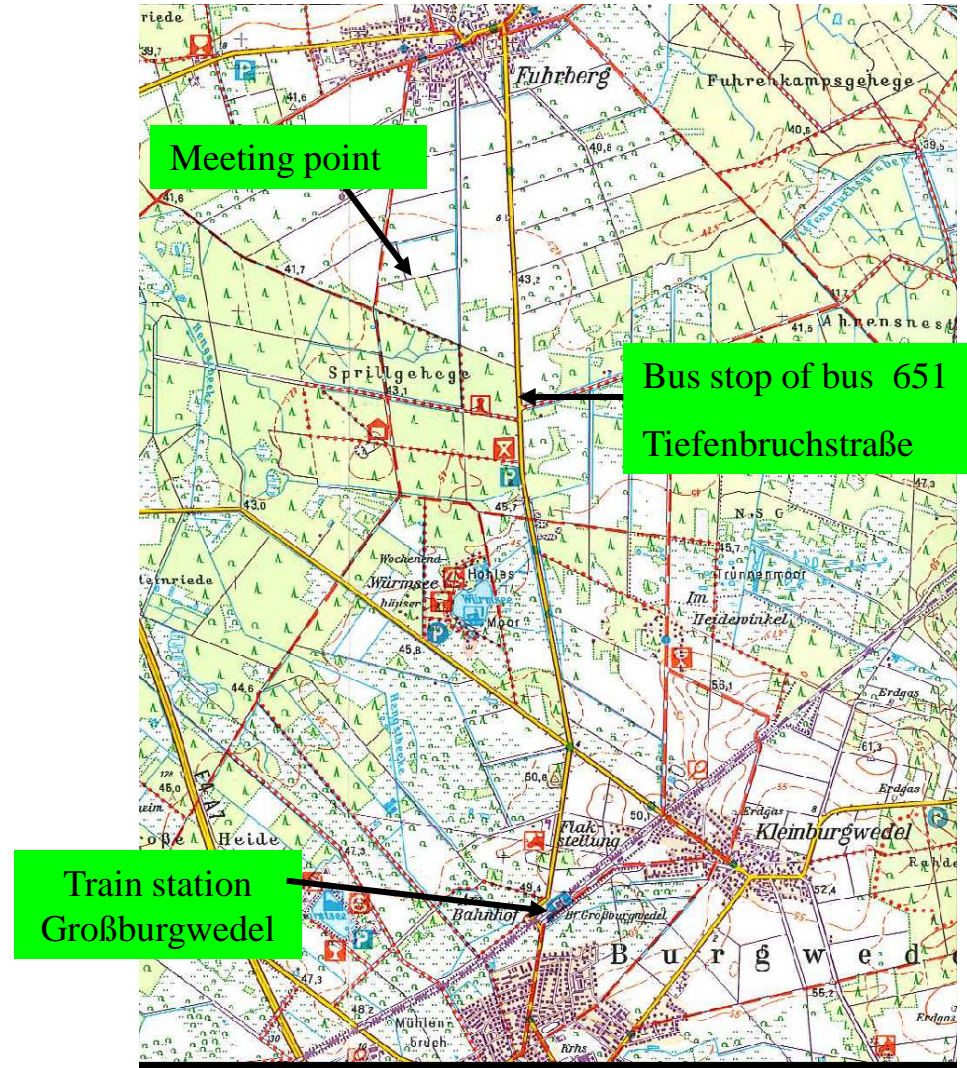
Walk to meeting point:

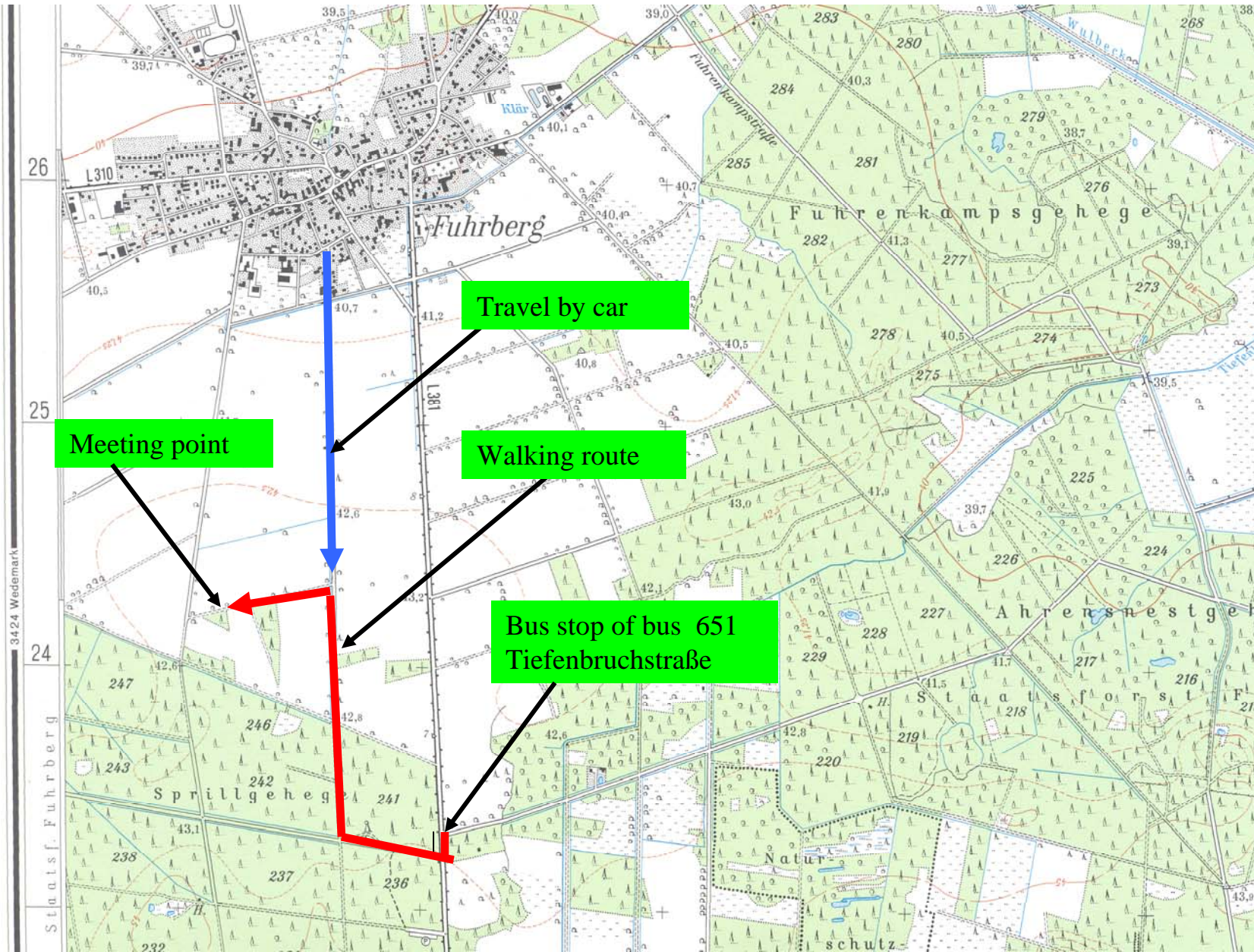
Arrival: 14.45

Return Bus 651:

Leaving 17.30 Bus stop
Dorfstraße Fuhrberg

(2012 o.k.)





Travel by car

Meeting point

Walking route

Bus stop of bus 651
Tiefenbruchstraße

1 km = 

Duijnsveld 0160/97306264 (excursion)