



'MossMet' – WebGIS auf Basis von Open Source-Software

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Gliederung

Einleitung

Architektur

Moos-Datenbank

WebGIS-Applikation

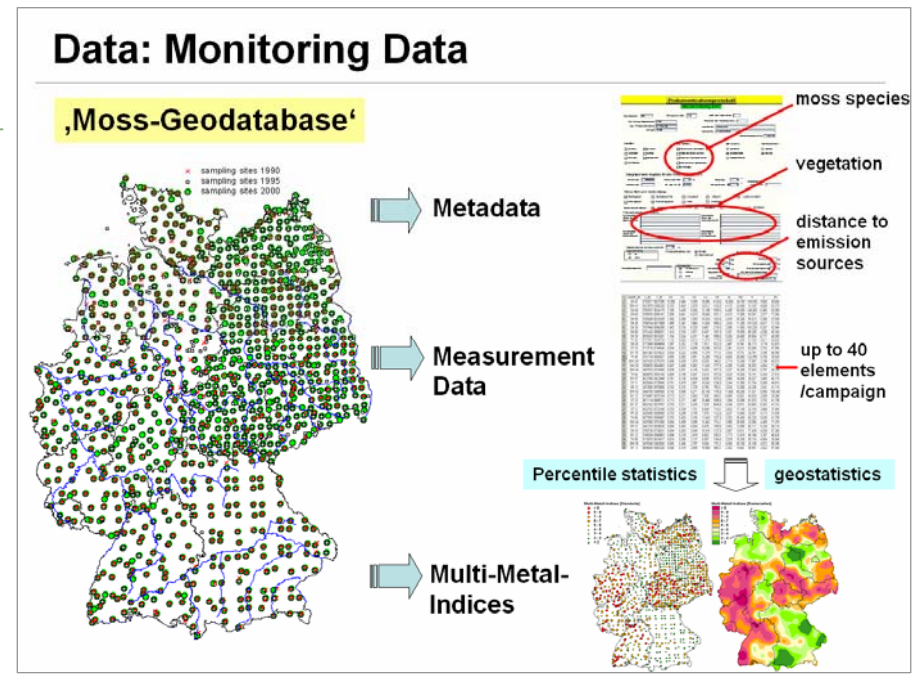
Ausblick

Einleitung

Ziele

Optimierung des Datenflusses

Web-basierte Geodatenbank



Einführung

„Moos-Datenbank“

Wetter*: <input type="radio"/> regnerisch <input type="radio"/> sonnig <input type="radio"/> bewölkt <input type="radio"/> neblig <input type="radio"/> Sonstiges	Moosart*: <input type="radio"/> <i>Pleurozium schreberi</i> <input type="radio"/> <i>Scleropodium purum</i> <input type="radio"/> <i>Hypnum cupressiforme</i>	Bewuchs*: <input type="radio"/> spärlich <input type="radio"/> polsterartig <input type="radio"/> rasenbildend	Verbreitung*: <input type="radio"/> selten <input type="radio"/> häufig	Kalkpartikel*: <input type="radio"/> keine <input type="radio"/> vereinzelt <input type="radio"/> zahlreich
Rechtswert: 3333333	Höhe u. NN* (m): <input type="text"/>	Nr. der TK 25: <input type="text"/>	Moosprobenvolumen*: <input type="radio"/> < 1 l <input type="radio"/> 1 - 2 l <input type="radio"/> > 2 l	Sprosslänge*: <input type="radio"/> < 10 cm <input type="radio"/> 10 - 15 cm <input type="radio"/> > 15 cm
Hochwert: 5555555	Neigung (°): <input type="text"/>	Exposition*: wählen		

Angaben zur Probenentnahmestelle

Lage der Probenentnahmestelle*:

Lichtung Nadelwald	Lichtung Laubwald	Lichtung Mischbestand	Lichtung Schonung	Heidelfläche	Grasland	Sonstiges

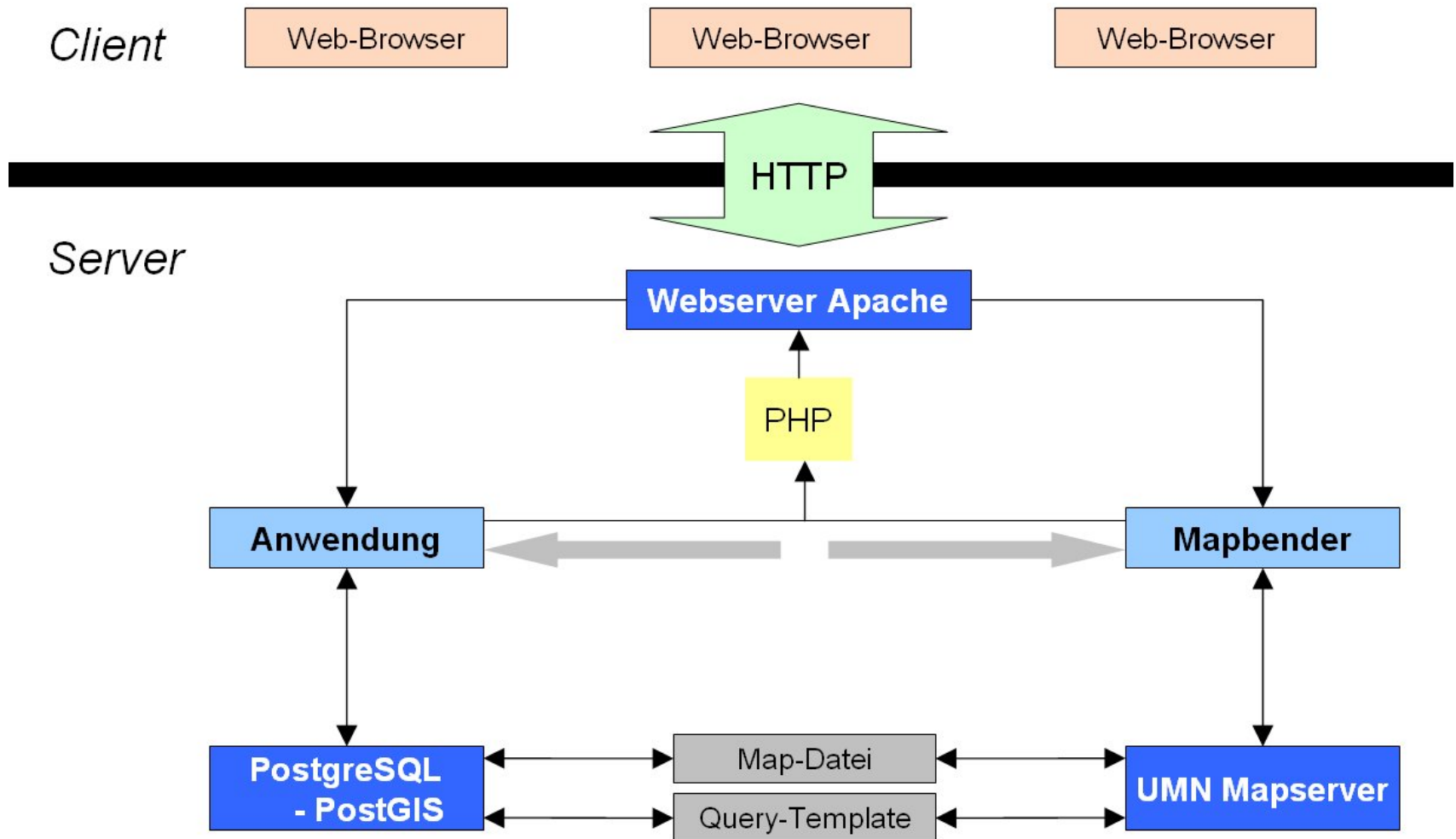
50 m → Hauptwindrichtung

- Metadatenerfassung
- Datenabfrage / -recherche
- Downloads, Hilfeseiten
- Kontaktadressen

„Moos-WebGIS“

- Moosdatenvisualisierung
- Datenabfrage
- Bereitstellung anderer Geodaten
- GIS-Operationen

Systemarchitektur und Kommunikation



'MossMet': Nutzeroberfläche

Login

Here you have to put in your personal user data.

User name:

Password:

Enter your personal data:

Registrierung

Forename:

Last name:

Identification: automatic assignment

Federal state:

E-mail:

Telephone:

Nutzeroberfläche

[Input metadata](#)

[Data-query](#)

[Data alteration](#)

[WebGIS](#)

[Downloads](#)

[Help](#)

[Contact](#)

[Forum](#)

[Logout](#)

1. If you are not registered in this Web-Application, fill out the table **user** in order to work with a assigned identification.

2. In case that you are registered, choose your identification. Then enter the coordinates of the sampling location.

Identification:

Welcome in the Moss-Monitoring-Web area. If you are logged in for **the first time** please use the **Help** documents, in order to get along in the system.

Contact: Prof. Dr. Winfried Schröder
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Contact in Case of Questions on
the *MossMet*-Application

'MossMet': Standortauswahl

Input metadata Data-query Data alteration WebGIS Downloads Help Contact Forum Logout

Enter coordinates of the location you sampled in order to find information on existing sampling sites. The coordinates must refer to the Gauß Krüger coordinate system No. 3/9 degree "West-D" (ellipsoid Bessel; date: "Potsdam"). If the coordinates are based on a different reference system, it is possible to convert the coordinates [here](#).

Koordinaten

Easting:

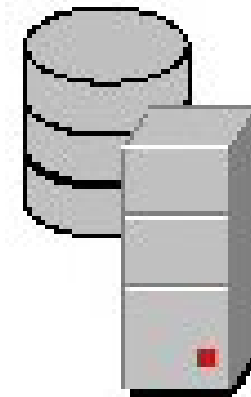
Northing:

Your sampling site is located within a radius of 2 km to the sampling site with the location-ID 1437. This location was sampled for 2 times.

<input type="checkbox"/>	Easting: 3581000 Northing: 5910000 Year of sampling: 1991 Location-ID: 1437 Sampling site ID: NI44
	Distance to NI44: 1.875,4 m
<input type="checkbox"/>	Easting: 3581440 Northing: 5908440 Year of sampling: 1995 Location-ID: 1437 Sampling site ID: NI44
	Distance to NI44: 360,6 m

Dear Mr. Mohr, you already documented **88** sampled site.

**2 Standorte im
2-km-Umkreis**



zentrale Datenbank

'MossMet': Metadatenerfassung



Beprobungsstandort

day of sampling * (DD-MM-YYYY):
time *:

identification *: KarMoh1
 Federal state *: Niedersachsen

township and administrative district *:

number of subsamples *:
sampling site ID *: NI45

general information:

weather * <input type="radio"/> rainy <input type="radio"/> sunny <input type="radio"/> cloudy <input type="radio"/> nebulous <input type="radio"/> miscellaneous	moss species * <input type="radio"/> <i>Pleurozium schreberi</i> <input type="radio"/> <i>Scleropodium purum</i> <input type="radio"/> <i>Hypnum cupressiforme</i>	fouling/vegetation * <input type="radio"/> sparse <input type="radio"/> pad-like <input type="radio"/> race-forming	dispersal * <input type="radio"/> rarely <input type="radio"/> common	lime particle * <input type="radio"/> none <input type="radio"/> rare <input type="radio"/> numerous
---	--	---	--	--

easting: 3592000	elevation * (m): <input type="text"/>	TK 25-ID: <input type="text"/>	sample volume *: <input type="radio"/> < 1 l <input type="radio"/> 1 - 2 l <input type="radio"/> > 2 l	shoot length *: <input type="radio"/> 5 < 10 cm <input type="radio"/> 10 - 15 cm <input type="radio"/> > 15 cm
northing: 5888000	gradient (*): <input type="text"/>	exposition *: <input type="text" value="select"/>		

information of sample location

position of the sampled location *:

glade	glade					
coniferous forest	deciduous forest	glade mixed forest	glade seedling brush	heathland	pasture	miscellaneous
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

50 m → main wind direction

'MossMet': Datenabfrage

Input metadata Data-query Data alteration WebGIS Downloads Help Contact Forum Logout

Select federal state:

All federal states

Baden-Württemberg

Bayern

Berlin

Brandenburg

Selection of sampling locations:

Location-ID 1990 1995 2000

Sampling locations of chosen federal state

1322 - TH43 TH43

1374 BY100 - -

1392 BY99 - -

10 BB64 BB16 BB16

Select meta- and measurement data:

township and administrative district:

coordinates: display display

day of sampling: time: display display

TK 25-ID: sample-
TK 25-ID: sample-
TK 25-ID: sample-

8 of 111 data records are shown as preview.

Sampling site ID	year of sampling	Federal state	Easting	Northing	Elevation	As	Cr	Fe	V	N
BW030	2006	BW	3543379	5304795	590	0.1	1.32	267.39289	0.72	1.61
BW040/A	2006	BW	3572648	5280355	705	0.14	1.26	284.58482	1.04	1.22
BW040/A	2006	BW	3572648	5280355	705	0.08	0.98	217.21267	0.78	1.47
BW150	2006	BW	3567956	5391016	625	0.12	1.38	238.05931	0.75	1.23
BW160	2006	BW	3585800	5386180	515	0.12	1.25	303.5807	0.78	1.53
BW060	2006	BW	3527359	5329296	610	0.12	1.79	288.09245	0.73	1.28
BW100	2006	BW	3491839	5304076	600	0.05	1.25	209	0.46	1.06
BW140	2006	BW	3535404	5353189	730	0.36	3.08	809.83272	1.91	1.5

Verlinkung von Metadaten und Messdaten

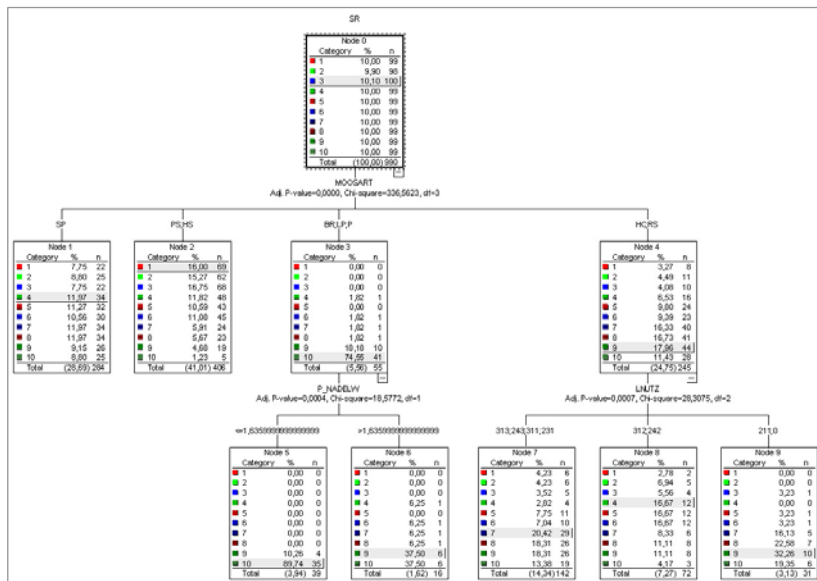
Query - preview Query - export

Datenauswahl exportieren

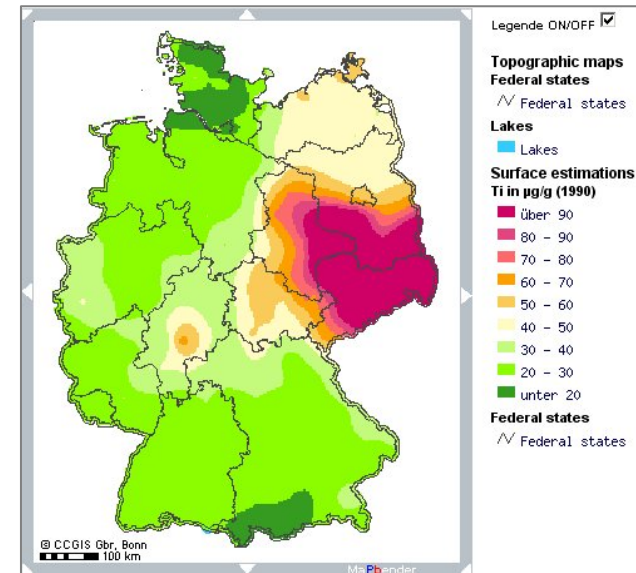
	A	B	C	D	E	F	G	H	I	J
1	ID	Sample site ID	Year of sampling	Federal state	Easting	Northing	Elevation	As	Cr	Fe
2	3145	BW030	2006	BW	3543379	5304795	590	0,1	1,32	267,39289
3	3144	BW040/A	2006	BW	3572648	5280355	705	0,14	1,26	284,58482
4	3144	BW040/A	2006	BW	3572648	5280355	705	0,08	0,98	217,21267
5	3148	BW150	2006	BW	3567956	5391016	625	0,12	1,38	238,05931
6	3149	BW160	2006	BW	3585800	5386180	515	0,12	1,25	303,5807
7	3156	BW060	2006	BW	3527359	5329296	610	0,12	1,79	288,09245
8	3157	BW100	2006	BW	3491839	5304076	600	0,05	1,25	209
9	3160	BW140	2006	BW	3535404	5353189	730	0,36	3,08	809,83272
10	3161	BW170/2	2006	BW	3501088	5359156	610	0,48	2,98	816,69316

'MossMet': Daten aufbereiten

statistische Analyse



Flächenschätzung



WebGIS-Applikation

Eingabe Probenentnahmeprotokoll **Navigationaleiste I** Datenabfrage Daten ändern WebGIS Downloads Hilfe Kontakt Logout

Bitte wählen Sie die zu puffernde Objekte aus:

- Moos-Standorte **A**
- Autobahn
- Landstraße

Daten-
weiter

Kenntnis: wählen **B**
Eigene Standorte anzeigen

Standortauswahl:
Bundesländer auswählen:

- alle Bundesländer
- Baden-Württemberg

Standortauswahl:
Standort-ID 1990 **C** 2000

- alle Standorte der gewählten Bundesländer

Daten differenziert auswählen:
Probejahr:

- Probejahr 1990
- Probejahr 1995
- Probejahr 2000

Standortauswahl in Karte anzeigen

Referenz-karte

Kartenwerkzeuge

Legende ON/OFF
Legende
Basiskarten
Bundesländer
 Bundesländer
Seen
 Seen
Moos-Monitoring
Messkampagne 1995
 Messkampagne 1995

Layer-
auswahl

- Basiskarten
- Landbedeckung
- Straßen
- Klima-Messstationen
- Landschaftseinheiten
- Moos-Monitoring
 - Messkampagne 1990
 - Messkampagne 1995
 - Messkampagne 2000
 - Messkampagne 2006
 - Standorte beschriften
 - individuelle Puffer
 - Eigene Standorte anzeigen
 - Standortauswahl

Kartenfenster

X-Coordinate: Y-Coordinate: ok

© CCGIS Gbr, Bonn
100 km
MaPbender

WebGIS-Applikation: Daten

- Topographic maps
 - Townships
 - Label townships
 - Administrative district
 - Label administrative district
 - Federal states
 - Lakes
 - Rivers
- Landcover
 - Corine Landcover
 - Corine Landcover (legend)
- Roads
 - Motorways buffer 300 m
 - Federal roads buffer 300 m
 - Motorways
 - Label motorways
 - Federal roads
 - Label federal roads
 - Motorways buffer (individual)
 - Federal roads (individual)
- Climate monitoring stations
 - Precipitation
 - Wind
- Landscape units
 - Ecological units (SCHMIDT 2002)
 - Natural classes (MEYEN et al. 1962)
- Moss surveys
 - Moss survey 1990
 - Moss survey 1995
 - Moss survey 2000
 - Moss survey 2006
 - Label sampling sites
 - Individual buffer
 - 2 km buffer
 - Show sampled sites
 - Selected sites
- Surface estimations
 - As in $\mu\text{g/g}$ (1990)
 - As in $\mu\text{g/g}$ (1995)
 - As in $\mu\text{g/g}$ (2000)
 - Cd in $\mu\text{g/g}$ (1990)

Standort-
abfrage

http://www.mapserver.uni-vechta.de ...

Description of the sampling site:

Sampling site ID: NI14

Year of sampling: 2000

Easting: 3446203

Northing: 5823560

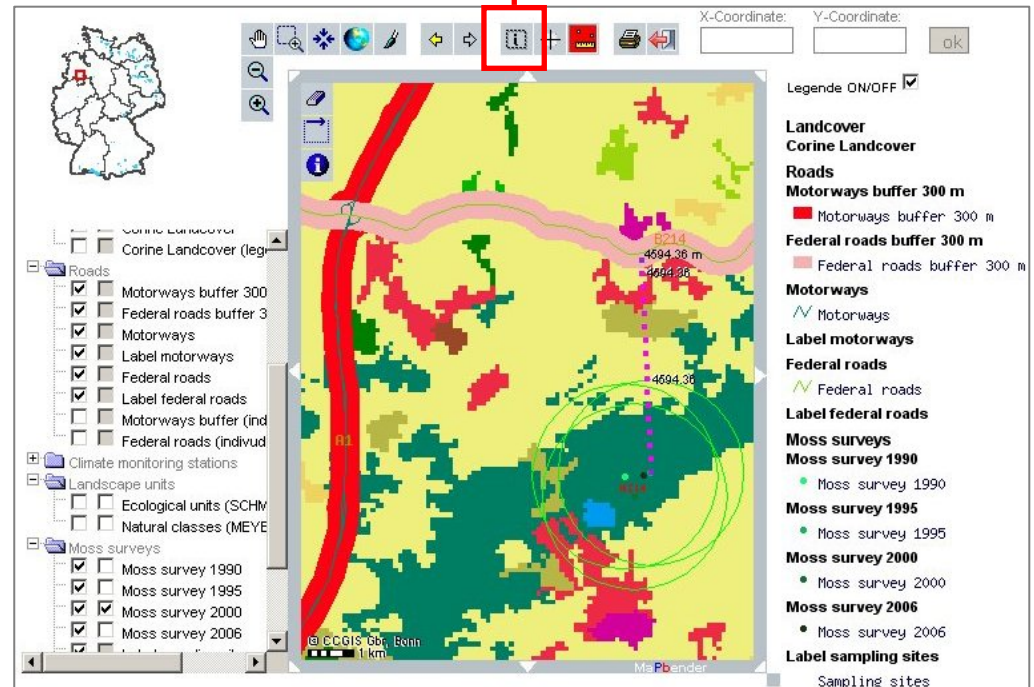
Exposition: 0

Moss species: Pleurozium schreberi

Position of sampling site: Lichtung

Distance to tree (m): 5 m

Distance to shrub (m): 4 m



WebGIS-Applikation: Pufferbildung

Select an object to buffer:

Sampling sites

Motorway

Federal roads



Motorway - buffer

select federal state:

Niedersachsen

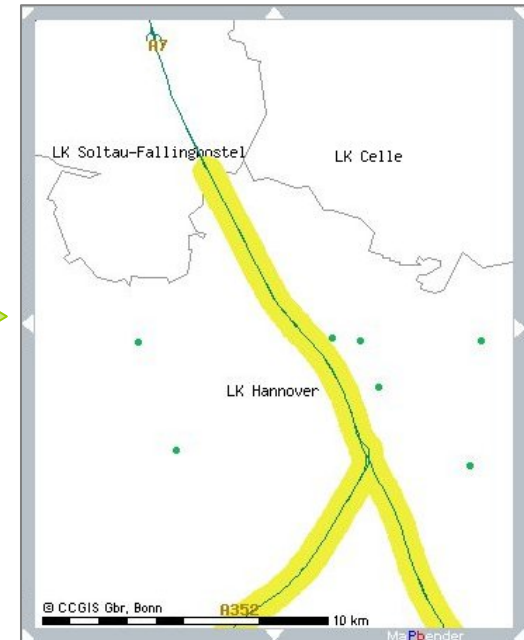
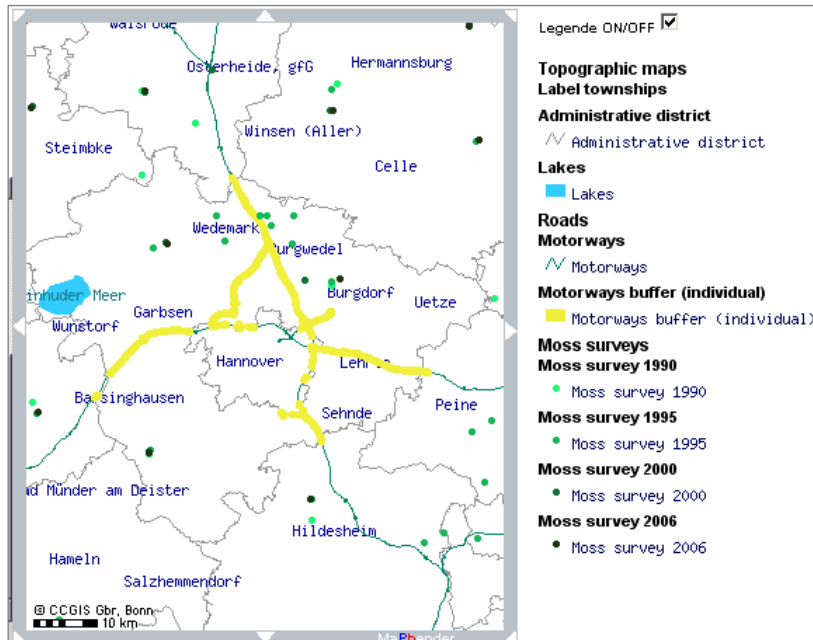


Motorway - buffer

select administrative district:

SK Hannover

Extent of the buffer: 500 m



Interaktive Standortauswahl

Selection of sampling locations:

Select federal state:

All federal states

Baden-Württemberg

Selection of sampling locations:

Location-ID 1990 1995 2000

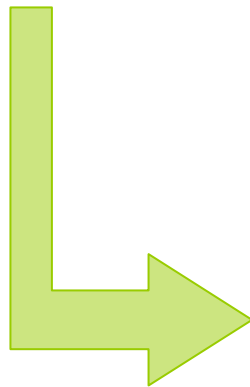
Sampling locations of chosen federal st:

Select meta- and measurement data:

elevation:

display from: to: m

display selection of sampling locations



X-Coordinate: Y-Coordinate:

Legende ON/OFF

Topographic maps

Federal states

Federal states

Lakes

Lakes

Moss surveys

Selected sites

Selected sites

- Topographic maps
- Landcover
- Roads
- Climate monitoring stations
- Landscape units
- Moss surveys
 - Moss survey 1990
 - Moss survey 1995
 - Moss survey 2000
 - Moss survey 2006
 - Label sampling sites
 - Individual buffer
 - 2 km buffer
 - Show sampled sites
 - Selected sites
- Surface estimations

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100 km
Mapbender

Ausblick

- WebGIS ausweiten (upload, download)
- Weitere GIS-Funktionen integrieren
- Weitere Geodaten einbeziehen (Messnetze)
- Mobiles WebGIS für die Messkampagne 2010?
- Europaweite MossMet-Applikation?



**Vielen Dank für
Ihre Aufmerksamkeit !**



Hochschule Vechta
Lehrstuhl für Landschaftsökologie

