



Universität für Bodenkultur Wien
Department für Wasser-Atmosphäre-
Umwelt

Department of Water, Atmosphere and Environment

Science on Order of the Environment



Facts and Figures (I) of BOKU Vienna



Universität für Bodenkultur Wien
Department für Wasser-Atmosphäre-
Umwelt

Students: 11.500

Scientific staff: ~1.200 (850 financed by projects)

Other staff: 430

Teaching, research and administrative facilities are located throughout Vienna at 20 different sites. Most of them are in the green districts – the 18th and 19th district – and are readily accessible by public transportation.

BOKU main building: A-1180 Vienna, Gregor Mendel-Strasse 33



Facts and Figures (II) of BOKU Vienna



Universität für Bodenkultur Wien
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Total budget: ~ EUR 100 mio.

External funds (2011): EUR 33 mio.

Number of ongoing projects: 750

Scientific publications (2011): ~2500

**Co-operation contracts with partner
companies and universities world-wide: 331**



Major sites of BOKU



Universität für Bodenkultur Wien
Department für Wasser-Atmosphäre-
Umwelt



**Vienna,
Türkenschanze,
Muthgasse**





The key priorities of the Department in research and education are undoubtedly in the area of water and water bodies. The qualitative and quantitative aspects of the water cycle, hydrological processes, soil-water-plant-atmosphere interactions, including soil physical aspects, soil water management and engineering, soil and water conservation, water supply, water distribution and use, water resources planning and decision making, hydropower engineering, waste water management (waste water treatment), solid waste management, but also protection of natural water resources and hydraulic engineering, river morphology and sediment transport, water quality, hydrobiology and aquatic ecosystem issues as well as river restoration concepts and restoration ecology are themes of research in the Department.

In Austria there is no organisation which can offer a broader scope on 'water' in teaching and research.

Another current priority regards climate change. The Department plays a central role in Austrian climate change research, as well with regard to research activities as with coordination. It is obvious that climate change research not only will bring the department's units together in joint research activities, but will also create strong bonds to other BOKU Departments and beyond.

Institutes

Sanitary Engineering and Water Pollution Control (SIG)

Mr. Univ.Prof. Dipl.Ing. Dr. Raimund HABERL

Waste Management (ABF-BOKU)

Mrs. ao.Univ.Prof. Dipl.Ing. Dr. Marion HUBER-HUMER

Meteorology (BOKU-Met)

Mrs. O.Univ.Prof. Dr. Helga KROMP-KOLB

Hydraulics and Rural Water Management (IHLW)

Mr. Univ.Prof. Dipl.Ing. Dr. Willibald LOISKANDL

Water Management, Hydrology and Hydraulic Engineering (IWHW)

Mr. Univ.Prof. Dipl.Ing. Dr. Helmut HABERSACK

Hydrobiology and Aquatic Ecosystem Management (IHG)

Mr. ao.Univ.Prof. Dipl.Ing. Dr. Stefan SCHMUTZ

Safety- and Risk Sciences (ISR)

Mr. ao.Univ.Prof.i.R. Dr. Wolfgang KROMP

3 Locations

Muthgasse 18

Sanitary Engineering and Water Pollution Control (SIG)

Mr. Univ.Prof. Dipl.Ing. Dr. Raimund HABERL

Water Management, Hydrology and Hydraulic Engineering (IWHW)

Mr. Univ.Prof. Dipl.Ing. Dr. Helmut HABERSACK (**Extension in Muthgasse 107**)

Hydraulics and Rural Water Management (IHLW)

Mr. Univ.Prof. Dipl.Ing. Dr. Willibald LOISKANDL (**Großenzersdorf**)

Muthgasse 107

Waste Management (ABF-BOKU)

Mrs. ao.Univ.Prof. Dipl.Ing. Dr. Marion HUBER-HUMER

Türkenschanze

Meteorology (BOKU-Met)

Mrs. O.Univ.Prof. Dr. Helga KROMP-KOLB (**Exnerhaus**)

Hydrobiology and Aquatic Ecosystem Management (IHG)

Mr. ao.Univ.Prof. Dipl.Ing. Dr. Stefan SCHMUTZ (**Max Emanuel Str. 17**) + **WASSERCLUSTER LUNZ**

Safety- and Risk Sciences (ISR)

Mr. ao.Univ.Prof.i.R. Dr. Wolfgang KROMP (**Borkowskygasse 4**)

Sanitary Engineering and Water Pollution Control (SIG)

Herr Univ.Prof. Dipl.Ing. Dr. Raimund HABERL

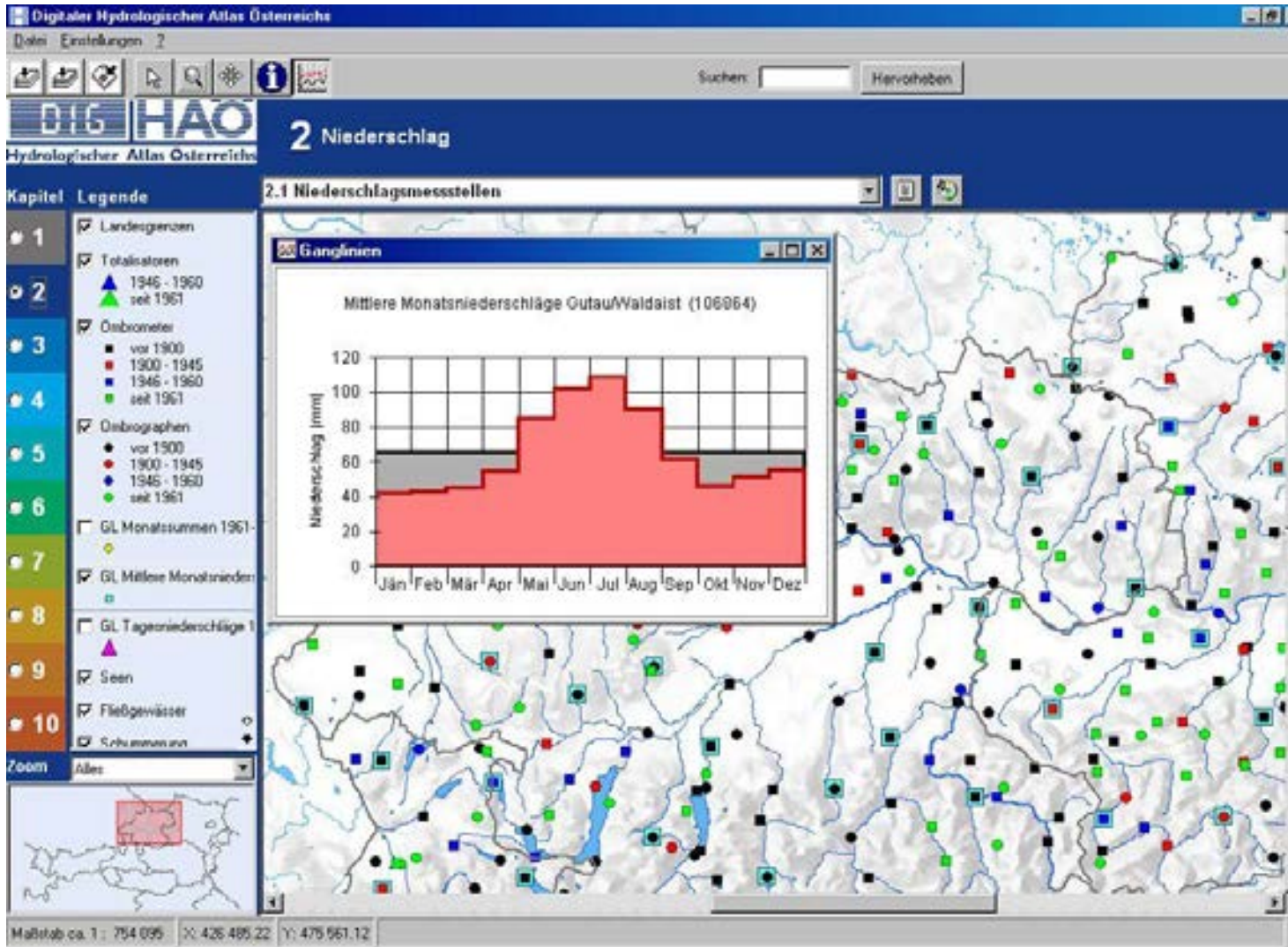


Universität für Bodenkultur Wien
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Umwelt













Research



Landfilling of inorganic waste
Landfilling of organic waste
Landfill aftercare
Landfill remediation



Organic matter in waste
Development of organic matter over time
Compost quality
Biological Treatment



Waste generation and prognosis
Waste prevention
Eco-design
Waste disposal systems
Assessment in waste management

Service



for students
for public authorities
for private organisations



Library
e-learning
Teaching material



Consulting
Specific Analytical Methods
Supply and interpretation of environmental data
Provide information

Teaching and Post Graduate Courses



Universität für Bodenkultur Wien
 Department für Wasser-Atmosphäre-
 Umwelt



High quality courses
 for B.Sc., M.Sc. and PhD programs
 „University meets Public“
 Textbooks



Advanced Training Courses:
 Abfallwirtschaftsbeauftragter
 Conferences:
 BOKU-Waste Conference 2005





Institut für Meteorologie (BOKU-Met)

Grenzschichtmeteorologie und kleinräumige Klimatologie

- Bodennahe Atmosphäre und ihre raum-zeitliche Struktur
- Strömungs- und Transportprozesse in komplexem Gelände
- Instrumentenentwicklung – Mini-SODAR
- Modellberechnungen zum Energie- und Stofftransport
- Klimakologie

Akustische Vertikalsondierung

Mono-Bistatic Vergleich
Doppler-Radialgeschwindigkeit



100m
10m
-7 m/s bis +7 m/s

Scattering Volume

Mono-static
Mono-Bistatic

Temperaturprofil
Grünloch

Wind und Turbulenz
in einem Urwald

Turbulenz im
Klimawindkanal

Institut für Meteorologie (BOKU-Met)

Atmosphärische Strahlung

Monitoring of total ozone and spectral UV radiation at the Sonnblick Observatory (3106 m, Austria)

Brewer and Bentham spectroradiometer DM150

UV-Biometer

CCD-cloud monitoring system



TOTAL OZONE



Total ozone (DU)

Year

— Anis
— Sonnblick

-2.2 %/decade




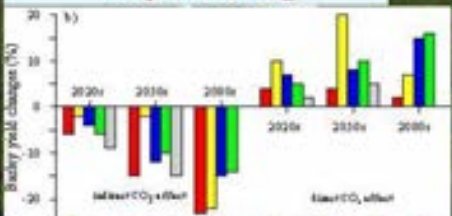
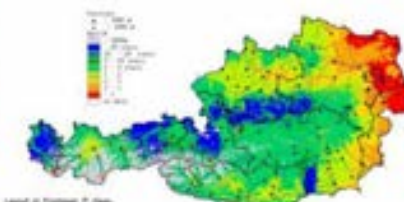
Institut für Meteorologie (BOKU-Met)

Agrarmeteorologie

Measuring the agro-environment

Climate change impacts and crop modelling

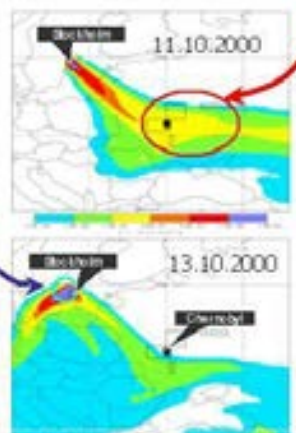
Drought monitoring

Unterschiedliche Herkunft von Cs-137 in der Luft in Stockholm:

a) Weitere Umgebung von Chernobyl

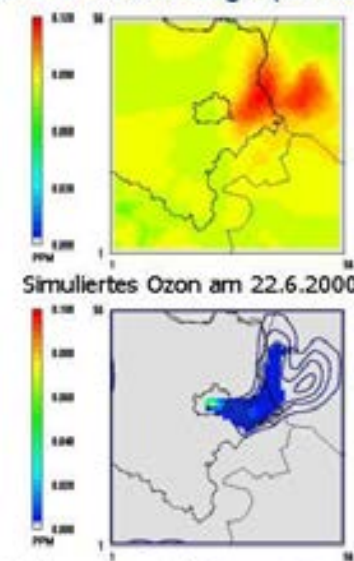
b) kontaminierter Wald in Schweden



Berechnung mit FLEXPART

Institut für Meteorologie (BOKU-Met)

Umwelt - Meteorologie

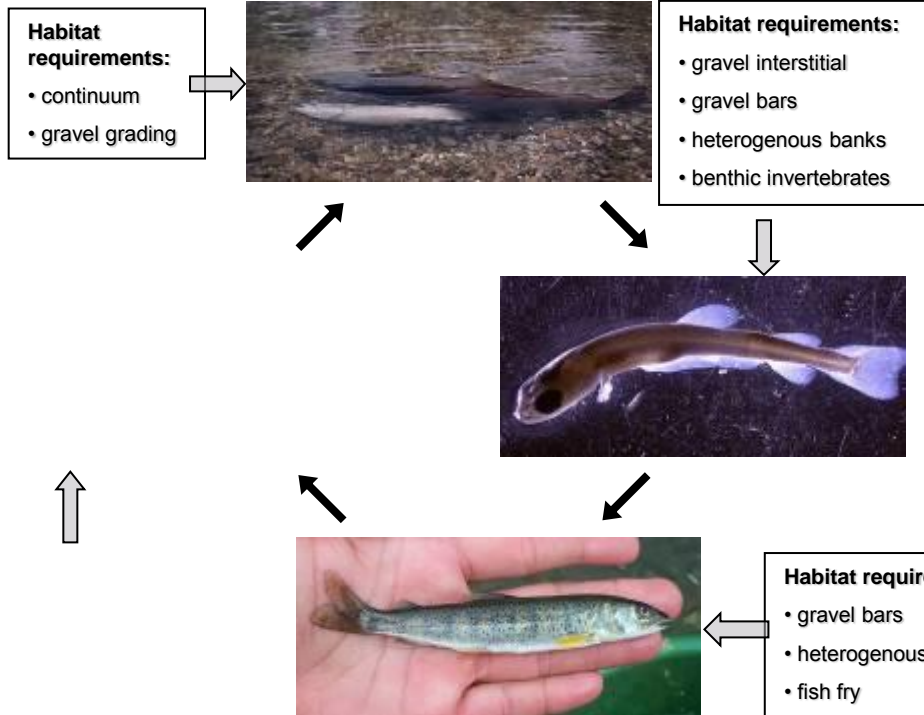


Simuliertes Ozon am 22.6.2000

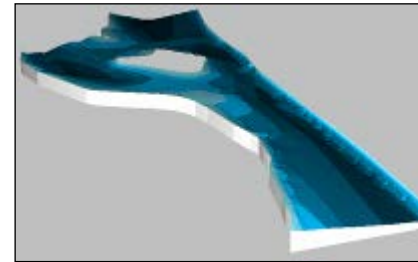
Kohlenwasserstoffe (aus Wien) und daraus entstandenes O₃ (Kontur)

Berechnung mit MM5/CAMx

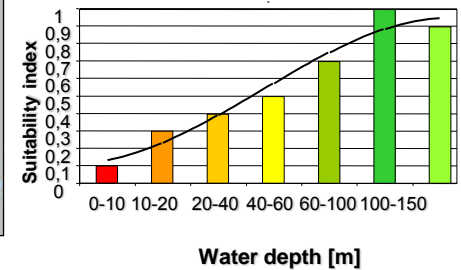
Habitat requirements



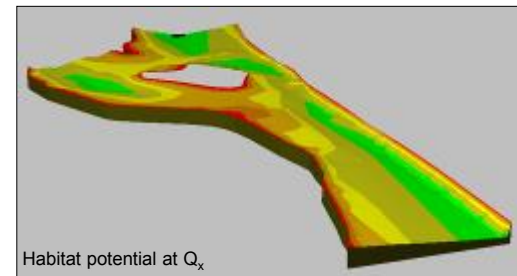
Habitat availability Q_x



Habitat modelling



Output of model

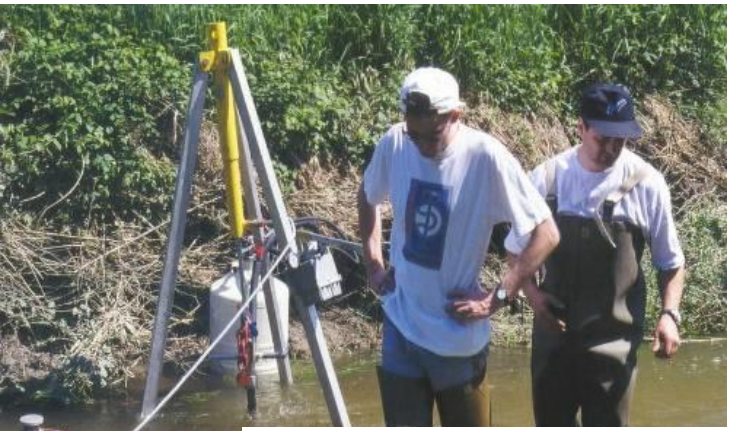




WasserCluster Lunz mit Zuordnung von Personal



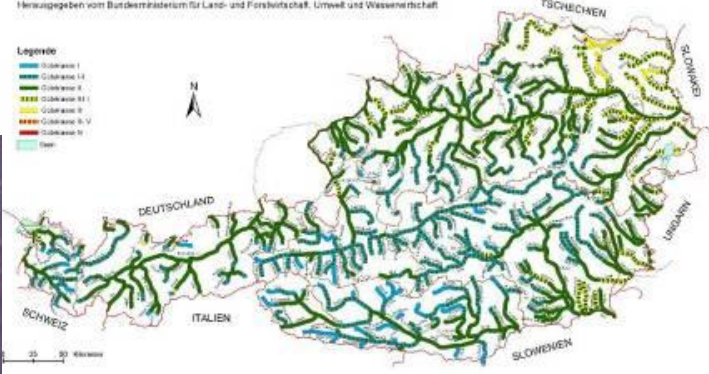
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Department für Wasser-Atmosphäre-Umwelt



Biologisches Gütebild der Fließgewässer Österreichs 2001
Herausgegeben vom Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft

Legende

- Grüner Balken: Güteklasse I
- Blauer Balken: Güteklasse II
- Gelber Balken: Güteklasse III
- Roter Balken: Güteklasse IV
- Orange Balken: Güteklasse V
- Blauer Balken: Güteklasse VI
- Blauer Balken: Dead

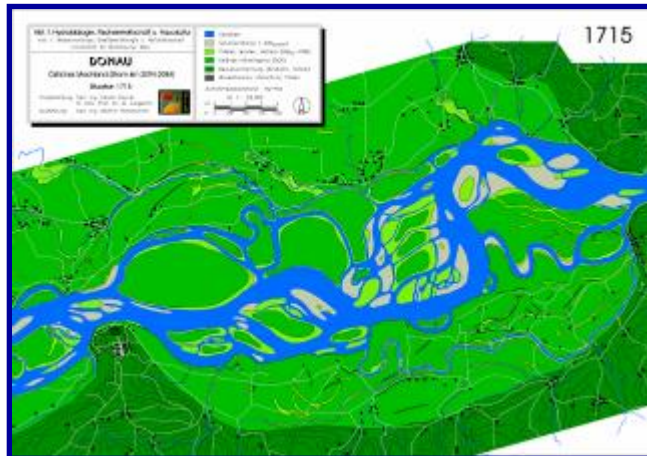


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Connectivity / dynamics



Measure Kleblach

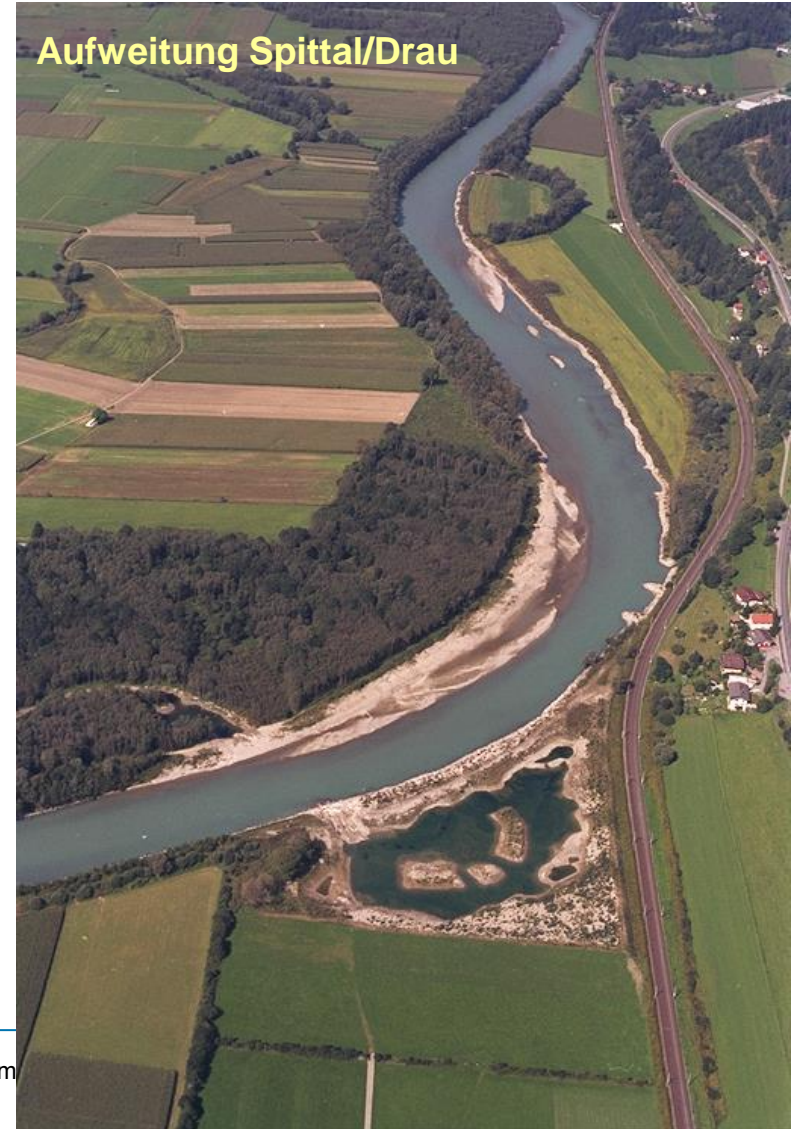


, Atr

LIFE-Projekt Obere Drau



Berg i. Drautal



Aufweitung Spittal/Drau

r Wien
osphäre-

Conclusions

In late autumn no 0+ grayling could be found within the whole restoration measure!

➤ The success of the restoration measure is reduced by the impact of hydropeaking





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<http://www.assess-hkh.at>

Laufzeit: 15.04.2005 - 14.04.2008

**FP6 - Managing humid and semi-humid ecosystems, STREP
INCO-CT-2005-003659**

10 Partner aus 8 Staaten

**Bangladesh, Bhutan, Indien, Nepal, Pakistan,
Österreich, Deutschland, Tschechien
plus 1 internationale Organisation**

wissenschaftlicher Koordinator: Univ. Prof. Dr.O. Moog



Integrating BOMOSA cage fish farming system in reservoirs, ponds and temporary water bodies in Eastern Africa



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Universität für Bodenkultur Wien
Moi University
Austrian Academy of Sciences
University of Bologna
Enki public benefit cooperation
Kenyan Ministry of Livestock and Fisheries
Development
Kenya Marine and Fisheries Research Institute
Egerton University
Ethiopian Institute of Agricultural Research
Department of Fisheries Resources Uganda