

# CV Ass. Prof. Dr. Jörn Kasbohm (Privat-Dozent)

## Curriculum Vitae

**Name:** Dr. Jörn Kasbohm  
**Address:** Erich-Böhmke-Str. 4a, 17489 Greifswald, Germany  
**Birthday, birth place:** June 10, 1961 in Berlin, Germany  
**Marital status:** married, 1 daughter

### Education:

2004 **University of Greifswald**  
Habilitation „Long-term stability of bentonite barriers for final radioactive waste repositories”

1985 - 1988 **University of Greifswald**  
PhD “Sulfur emission from lignites” (magna cum laude)

1980 – 1985 **University of Greifswald, TU Freiberg**  
study of geology & diploma degree

1968 – 1980 school

### Professional Development:

since 2009 **GeoENcon Ltd., Greifswald**  
Shareholder & Director of Research

2005 – 2008 **University of Greifswald**  
Liaison officer “Greifswald – Hanoi”  
Activities for international co-operation in higher education (mainly with Vietnam and Thailand)

1988 – 2008 **University of Greifswald, Institute of Geography and Geology**  
Researcher

### Field of Research:

Clay Mineralogy (*phase analysis & environmental applications*)  
Environmental Sciences / Sustainability  
Integrated Water Resource Management

### Supervisor for PhD-, MSc.- & Diploma-theses and others linked with Vietnam:

[commonly in cooperation with Hanoi University of Science / VNU and Institute of Geological Sciences / VAST]

### FIELD MAPPING & SCIENTIFIC STUDENT'S WORK

(1) „**Mineralogische Charakterisierung von ausgewählten Pyrophyllitproben aus der Lagerstätte Tan Mai, Vietnam**“ (Mineralogical characterization of selected pyrophyllitic samples from the deposit Tan Mai, Vietnam)  
Jaqueline Kroos, University of Greifswald 2004

(2) „**Mineralogische und geochemische Charakterisierung eines Bodentiefenprofils aus der Siedlung Tong Xa**“  
(Mineralogical and geochemical characterization of a soil profile from the handy craft village Tong Xa, Nam Dinh Province)

Ramona ROHRBECK, University of Greifswald (2006)

(3) „**Characterization and Mapping of Households in urban areas as social-geographic background for IWRM-concepts - Case study in residential areas of Nam Dinh city**“

NGUYEN Thi Hong & LE Thi Kim Oanh, University of Greifswald (2008)

(4) „**Environmental Health Risk originating from household sanitation in rural areas of Nhue-Day River Basin**“

NGHIEM Quynh Huong, University of Greifswald (2008)

(5) „**Effects of landuse on heavy metal distribution in agricultural soils around handicraft villages, Red River Delta, Vietnam**“

Alexander BARTELS, Thomas PUTZMANN, Jochen WALSCH, University of Hannover (2008)

(6) „**Untersuchung von Redoxverhältnissen in nordvietnamesischen Aquakulturböden der Nam Dinh Provinz, Vietnam**“ (Investigation of anaerobic conditions in soils from aquaculture sites in Nam Dinh province, Vietnam)

Birgit JESTER, Bastian KÜHNE, University of Hannover (2009)

DIPLOMA-THESIS (incl. field mapping)

(7) „**Zur holozänen Entwicklung des Red River Delta (Vietnam)**“ (The geological history of Red River Delta (Vietnam) in Holocene)

Steffen GROTHE, University of Greifswald (2003)

(8) „**Untersuchungen zur Gewässereinschätzung in Siedlungsräumen der Provinz Nam Dinh/Vietnam**“

(Investigation of river quality in urban areas of Nam Dinh province, Vietnam)

Nicole PAVLIK, University of Greifswald (2007)

(9) „**Anthropogen verursachte Schwermetallverteilung in landwirtschaftlichen Böden des Siedlungsraums**

**Tong Xa / Vietnam**“ (Anthropogenic heavy metal contamination in agricultural soils of handy craft village Tong Xa, Vietnam)

Ramona ROHRBECK, University of Greifswald (2007)

(10) „**Schwermetallemissionen aus Gießereibetrieben in Tong Xa/Vietnam**“ (Heavy metal emission from foundry enterprises in Tong Xa / Vietnam)

Kristin ASSMUS, University of Greifswald (2009)

(11) „**Regionale Energieautarkie und deren Chancen für die Gestaltung von neuen Stadt/Umland-Beziehungen**“ (Decentralized Energy Production and its Chances for the Development of improved urban/rural-Relations)

Alexander SEIBKE, University of Greifswald (2011)

MASTER-THESIS (incl. field mapping)

(12) „**MOSKITO-GIS software as starter tool for a Decision Support System (DSS) in IWRM – planning processes of WWT-concept ‘ND cityline’<sup>iaks</sup> in Nam Dinh city, Vietnam**“

NGUYEN Thi Hong, University of Greifswald (2009)

(13) „**Environmental Impact Assessment study for the Integrated Water Resources Management (IWRM) related Wastewater Treatment (WWT) concept ‘NDcityline’<sup>iaks</sup> in Nam Dinh city, Nam Dinh province, Vietnam**“

LE Thi Kim Oanh, University of Greifswald (2009)

(14) ***“Public Health Data as ‘Eco-Meter’ in Integrated Water Resources Management (IWRM) – activities. Case study concerning Diarrhea & Dysentery as example in Nam Dinh Province/Vietnam”***  
NGHIEM Quynh Huong, University of Greifswald (2009)

PhD-THESIS

(15) ***“Recent geochemical and mineralogical alteration processes in tropical coastal sediments of Vietnam”***  
NGUYEN Thi Minh Ngoc, University of Greifswald (2006)

(16) ***“Characterization of Clays and Clay Minerals for Industrial Applications: Substitution non-Natural Additives by Clays in UV Protection”***  
HOANG Thi Minh Thao, University of Greifswald (2006)

(17) ***„Geostatistical tools for better characterization of the groundwater quality – case studies for the coastal quaternary aquifers in the Nam Dinh area/Vietnam“***  
HOANG Duc Ngia, University of Greifswald (2008), co-supervision

(18) ***“Transport of heavy metals in paddy soil of the Red River delta (Vietnam) in relation to soil chemical and mineralogical properties”***  
NGUYEN Ngoc Minh, University of Greifswald (2008)

(19) ***“Integrated Water Resources Management and Institutional Change in Vietnam and Poland – A Comparative Analysis with Special Consideration of the River Basin Level”***  
Steffen GROTHE, University of Greifswald (2009), co-supervision

(20) ***“Mineralogical Characterization of Fe-Montmorillonites”***  
NGUYEN Thanh Lan, University of Greifswald (2011)

**Lecturer program:**

Germany:

**University of Greifswald**

Diploma program „Geologie/Paläontologie“ /

B.Sc.-program „Geologie“

Lagerstättenkunde (*Mineral Deposits*)

Komplexe Phasenanalyse (*Complex Phase Analysis*)

Einführung in die Tonmineralogie (*Introduction in Clay Mineralogy*)

M.Sc.-Program „Geoscience & Environment“

module "sustainable management of georesources" (8 CP)

+ sustainable applications of mineral raw material

+ mineral raw material & waste management

+ resources management (incl. IWRM)

+ properties of mineral raw material (experimental approach)

module "economic geology in unconsolidated rocks" (8 CP)

+ economic geology of rocks & surficial rocks

+ clay & soil mineralogy

Vietnam:

**Hanoi University of Science (VNU) (2001-2008)**

JGEP/GGSS-Courses:

“Introduction in the Clay Mineralogy”

“Sustainable management of georesources”

“Integrated Water Resource Management”

### **Head of International and Interdisciplinary Projects** (last 10 years):

- Research:
- „Basics for a sustainable development in the Nam Dinh-region/ Vietnam“ (2000-2003) (*BMBF/DLR: VNM 00/004*)
  - „Long-term stability of clay barriers “ (2001-2002)  
(*BMBF: 02 C 0659 0 – 77048 – UA 1902*) via *GRS mbH*
  - Feasibility Study “Integrated Water Resource Management in Vietnam“  
(part: University of Greifswald) (2004-2005)  
(*BMBF/DLR: VNM 04/005*)
  - „Phase analysis on acid-treated Friedland clay“ (2003-2004) (*PPM e.V., Magdeburg*)
  - „Mineralogical characterization of bentonites“ (2004-2007)  
(*EU-FP6: 02E9884-770800-UA2444 BENKOR*) with *GRS mbH*
  - „Feasibility study - Biotechnology in Vietnam“ (2005-2007)  
(*BMBF/DLR: VNM 05/008*)
  - „Integrated Water Resource Management – Nam Dinh / Vietnam“  
(2006 – 2009) (*BMBF: 02WM0765*)
  - “Characterization of Fe-montmorillonite for clay barriers in final repositories for radioactive waste” (2008-2011)  
*GRS mbH*
  - Pre-Feasibility Study “NDcityline<sup>ia</sup>ks - A wastewater treatment concept for Nam Dinh city” (2009-2010)  
*People’s Committee of Nam Dinh city*

### Co-operation in higher education:

- Joint Educational Training Center ‘Hanoi-Greifswald’ at Hanoi University of Science, Vietnam (in frames of DAAD-programme „Export of German Study Programmes “ (2001-2003)
- „JGEP-Spring School“ 2004, 2005 und 2006 in frame of „Joint Graduate Educational Programme“ with Hanoi University of Science, Vietnam (*DAAD*)
- ISAP „Geoscience & Environment“ University of Greifswald & Hanoi University of Science (VNU, Vietnam) 2005-2008 (*DAAD*)
- HSP “Biochemistry” University of Greifswald / Hanoi University of Science (VNU, Vietnam) 2008 (*DAAD*)
- HSP “Molecular Biology” University of Greifswald / College of Technology (VNU, Vietnam) 2008 (*DAAD*)

### **Member in scientific societies:**

- Society of Geosciences (GGW)
- German Clays and Clay Mineral Group (DTTG)

German Society for Electron Microscopy (DGE)  
German Society for Soil Sciences (DGB)  
Association Internationale pour l'Etude des Argiles (AIPEA)  
GCC Network for Drylands Research and Development (NDRD)

### **Selected List of own and/or supervised Papers related to Sustainability / Vietnam**

Editor or Scientific Board: Journal of Geology, Series B, 21(2003)  
[www.idm.gov.vn/nguon\\_luc/xuat\\_ban/2003/21/mucluc.htm](http://www.idm.gov.vn/nguon_luc/xuat_ban/2003/21/mucluc.htm)

Journal of Geology, Series B, 25(2005)  
[www.idm.gov.vn/nguon\\_luc/xuat\\_ban/2005/B25/mucluc.htm](http://www.idm.gov.vn/nguon_luc/xuat_ban/2005/B25/mucluc.htm)

Journal of Geology, Series B, 29(2007)  
[www.idm.gov.vn/nguon\\_luc/xuat\\_ban/2007/B29/mucluc.htm](http://www.idm.gov.vn/nguon_luc/xuat_ban/2007/B29/mucluc.htm)

Journal of Geology, Series B, 33(2009)  
[www.idm.gov.vn/nguon\\_luc/xuat\\_ban/2009/b33/mucluc.htm](http://www.idm.gov.vn/nguon_luc/xuat_ban/2009/b33/mucluc.htm)

### **Selected own Papers concerning Water & Sanitation:**

#### **Journal of Geology, Series B, No. 21, 2003**

(1) Lê Thị Lại, Kasbohm J., Đào Huy Quý, Trần Trọng Huệ, M. T. Schafmeister  
**Geochemical Characterization Pathways "Production Site - Water - Sediment - Soil - Food - Residents" as Basis for an in-situ Treatment System in the Craft-Settlements of Nam Định Province.**

(2) Kasbohm J., Lê Thị Lại, Schafmeister M. T., Trần Trọng Huệ, Henning K. H.  
**Mineralogical investigation of soils in selected settlements of the Nam Định region, Việt Nam.**

(3) Lại Thúy Hiền, Trần Đình Mẫn, Nguyễn Văn Long, Hoàng Hải, Lê Thị Lại, Kasbohm J.  
**Microbial Technology for Heavy Metal Treatment of Craft-Settlement Wastewater.**

(4) Kiều Quỳnh Hoa, Sottnik P., Lại Thúy Hiền, Lê Thị Lại, Kasbohm J.  
**The Anaerobic Lab-Scale Test of Heavy Metal Wastewater Treatment of the Vân Chàng Craft-Settlement, Nam Định Province.**

#### **Journal of Geology, Series B, No. 25, 2005**

(5) Daeschlein G., Scholz S., Kasbohm J., Lê Thị Lại, Schafmeister M.-Th., Kramer A.  
**Implementation of reed beds with subterranean high pressure injection ("Subterra") for irrigation purpose in a rural environment in North Việt Nam (Province Nam Định).**

#### **Tap chí địa chất, A, 295, 7-8/2006** (Journal of Geology, Series A, No. 295 (7-8/2006))

(6) Lê Thị Lại, Kasbohm, J.  
**Nguy cơ nhiễm bẩn nước dưới đất.** p. 91-98.

#### **Journal of Geology, Series B, No. 29, 2007**

(7) N. Pavlik, J. Kasbohm, Dang Diem Hong, Lê Thị Lại  
**"Categorization of biological water quality using diatoms on example of Nam Định City, Việt Nam"**

(8) Nguyễn Thanh Lan, Nguyễn Thị Thu Thủy, Wilhelm Steingrube  
**"Review of socio-economic situation and spatial development planning by local authorities in Yên Xá Commune, Ý Yên District, Nam Định Province, Việt Nam"**

#### **Journal of Geology, Series B, No. 33, 2009**

(9) Kasbohm J., S. Grothe, W. Steingrube, Lê Thị Lại, Lê Đức Ngân, Nguyễn Thị Hồng, Lê Thị Kim Oanh, Nghiêm Quỳnh Hương  
**"Integrated Water Resources Management (IWRM) - An Introduction"**

(10) Lê Thị Lại, J. Kasbohm, Nguyễn Đức Rõ, Đoàn Văn Cảnh, Đỗ Văn Bình

**“Preworks for a future IWRM-monitoring of water resources in Nam Định Province”**

(11) Grothe S., R. Emmerich, W. Steingrube, J. Kasbohm, P. Kraska

**“House types as indicator of household welfare and domestic water supply and sanitation in a craft village in Nhuệ-Đáy River Basin”**

(12) Grothe S., R. Emmerich, J. Kasbohm

**“Sustainable municipal wastewater management for a craft village in Nhuệ-Đáy River Basin”**

(13) Erhardt B., K. Fischer, J. Kasbohm, Lê Đức Ngân, Lê Thị Lại, H. Wessel, Nguyễn Thị Hồng, Lê Thị Kim Oanh, Đoàn Minh Vũ, S. Schlüter, V. Keuter

**“NDcityline<sup>ia</sup>ks’-system: A module-like decentralized waste water treatment concept for Nam Định City”**

(14) Nguyễn Thị Hồng, J. Kasbohm, H. Wessel, J. Hartleib

**“GIS-based starting tools of decision-making for WWT-planning”**

#### **Journal of Plant Nutrition and Soil Science, 172/2009**

(15) Minh Nguyen Ngoc, Dultz, S., Kasbohm, J., Duc Le

**Clay dispersion and its relation to surface charge in a paddy soil of the Red River Delta, Vietnam.-**

p. 477–486.

#### **Agriculture, Ecosystems & Environment, 129(1-3)2009**

(16) Minh Ngoc Nguyen; Dultz, S.; Kasbohm, J.

**Simulation of retention and transport of copper, lead and zinc in a paddy soil of the Red River Delta, Vietnam.-** p. 8-16

#### **Journal of Biotechnology, 8(2010)3A**

(17) Kasbohm, J.; Erhardt, B.; Steingrube, W.; Le Thi Lai; Lai Thuy Hien; Nguyen Thi Thu Huyen

**Expected Tasks for Biology and Biotechnology in Development of Wastewater Treatment for Vietnam – A Review.** p. 397-404.

#### **Proceedings Greener City, Hanoi, 16-17 December 2010**

(18) Kasbohm, J.; Erhardt, B.; Steingrube, W.; Le Thi Lai; Nguyen Thi Hong; Le Duc Ngan; Nguyen Viet Dung; Tran Manh Tien

**Wastewater & Resources Management: Visions and Options for Green City-Concepts in Vietnam. p. 1-16**

Selected own Papers concerning Clays, Environment & Technology:

(19) Gilg, H. A.; Weber, B.; Kasbohm, J.; Frei, R. (2003): **Isotope geochemistry and origin of illite-smectite and kaolinite from the Seilitz and Kemmlitz kaolin deposits, Saxony, Germany.** Clay Minerals 38(2003)1: 95-112 (DOI: 10.1180/0009855033810081)

(20) Herbert, H.-J.; Kasbohm, J.; Henning, K.-H. (2004): **Long-term behaviour of the Wyoming bentonite MX-80 in high saline solutions.** Applied Clay Sciences 26(2004): 275-291 (doi:10.1016/j.clay.2003.12.028)

(21) Pusch, R., Kasbohm, J., Pacovsky, J., Cechova, Z. (2007): **Are all smectite clays suitable as “buffers”?** Physics and Chemistry of the Earth, Parts A/B/C, **32**(1-7): 116-122, [Clay in natural and engineered barriers for radioactive waste confinement - Part 1] (doi:10.1016/j.pce.2006.03.008)

(22) Herbert, H.-J., Kasbohm, J., Sprenger, H., Fernandez, A. M., Reichelt, C. (2008): **Swelling pressures of MX-80 bentonite in solutions of different ionic strength.** Physics and Chemistry of the Earth, Parts A/B/C, Volume 33, Supplement 1 (2008): S327-S342 (doi: 10.1016/j.pce.2008.10.005)

- (23) Pusch, R., Lie Zhang, Adey, R., Kasbohm, J., (2010): ***Rheology of an artificially prepared clay.*** Applied Clay Science: 47(1-2), 120-126 (doi: 10.1016/j.clay.2009.08.031)
- (24) Hoang-Minh, T, Le, T.L., Kasbohm, J., Gieré, R. (2010): ***UV-protection characteristics of some clays.*** Applied Clay Science: 48(3), 349-357 (doi:10.1016/j.clay.2010.01.00)
- (25) Pusch, R., Kasbohm, J., Hoang Thi Minh Thao (2010): ***Chemical stability of montmorillonite buffer clay under repository-like conditions - A synthesis of relevant experimental data.***- Applied Clay Science: 47(1-2), 113-119 (doi:10.1016/j.clay.2009.01.002)
- (26) Hoang Minh Thao, Le Thi Lai, Kasbohm J., Gieré R. (2011): ***Substituting non-natural agents in UV-protection cream by a mixture of clay with Ganoderma pfeifferi extract.*** Applied Clay Science 53 (2011) 66–72 (doi:10.1016/j.clay.2011.04.024)
- (27) Kasbohm, J., Pusch, R., Nguyen Thanh Lan, Hoang Minh Thao (2012): ***Performance of expandable clays in HLW repository near-field.***- Environmental Earth Sciences (submitted: ENGE-D-11-00869)