



Project no. **INCO-CT-2005-003659**

Project acronym: **ASSESS-HKH**

Project title: **Development of an Assessment System to Evaluate the Ecological Status of Rivers in the Hindu Kush-Himalayan Region**

Instrument: **Specific targeted research or innovation project**

Thematic Priority: **Specific measures in support of international co-operation;
A.2.1 Managing humid and semi-humid ecosystems**

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1 INTRODUCTION

The ASSESS-HKH project has produced a wide variety of products useful for water management and environmental monitoring in the ASSESS-HKH region (manuals, assessment systems, databases, software). The focus of the project was, therefore, more on the practical outcome rather than on scientific publications. However, ASSESS-HKH has also greatly improved the knowledge on the ecology of rivers in the Hindu Kush-Himalayan region and their biota, and on the scientific basis of mitigation measures. These results have already led to many scientific publications in the proceedings of the final conference, and further papers are in preparation.

The ASSESS-HKH consortium agreed on two pivotal means of publication. First, proceedings of the “International Conference on Rivers in the Hindu Kush Himalaya: Ecology and Environmental Assessment”, which was held from 3-7 March 2008 in Dhulikhel (Nepal) were published. The proceedings include 25 papers on presentations given on the conference and on related scientific results, most of which directly results from the project. Second, the consortium agreed on the outlines of a special issue in an international peer-reviewed journal, for which 15 manuscripts are planned.

Further publications, which are not streamlined through the two above mentioned sample publications, are planned by several partners, as the ASSESS-HKH data set offers opportunities for a wide variety of additional papers. This deliverable describes background, concept and contents of the two main sample publications. Further, conference presentations are listed in the 3rd year Activity Report of the ASSESS-HKH project to the Commission and the coordinator will provide the EU with all publications, which will be produced in future.

2 CONFERENCE PROCEEDINGS

The “International Conference on Rivers in the Hindu Kush Himalaya: Ecology and Environmental Assessment” was one of the project’s major dissemination events. All ASSESS-HKH partners presented their results supplemented by talks of external scientists. Directly after the conference all these presentations and some additional manuscripts resulting from the ASSESS-HKH project were submitted to the workpackage leader, who was responsible for editing and typesetting the

proceedings. 250 copies of the proceedings, which comprise 25 contributions (Table 1) and about 250 pages, are now being printed. In addition, the proceedings will be made available as a pdf file through the project’s homepage (www.assess-hkh.at).

Table 1: Contents of the Conference Proceedings

Author(s)	Title
O. Moog, D. Hering, T. Korte, S. Sharma & I. Stubauer	Sustainable Water Management Needs to be Based on a Sound Scientific Fundament
M.T. Barbour	The Societal Benefit of Biological Assessment and Monitoring in Rivers
I. Stubauer, O. Moog, D. Hering, T. Korte, A. Hoffmann, K. Brabec, S. Sharma, M. Shrestha, M. A. Kahlow, M. A. Tahir, A. Kumar, M. P. Sharma, M. F. Bari, A.B.M. Badruzzaman & G. K. Chhopel	The ASSESS-HKH project: Context, Approaches, Objectives and Results
A. Hartmann & O. Moog	Development of a Field Screening Methodology to Evaluate the Ecological Status of the Streams in the HKH Region
T. Ofenböck, O. Moog & S. Sharma	Development and Application of the HKH Biotic Score to Assess the River Quality in the Hindu Kush - Himalaya
T. Korte, D. Hering, A.B.M. Baki, T. Ofenböck & A. Hartmann	Development of the HKH-Index for Ecological River Quality Assessment in the Hindu Kush- Himalaya Region
S. Sharma, O. Moog, A. Schmidt-Kloiber & K. Brabec	Contribution to the Knowledge of Aquatic Macro-Invertebrates From Hindu Kush – Himalaya
A. Hoffmann & M. Shrestha	The Contribution of ASSESS-HKH to a Sustainable Water Use in the Hindu-Kush-Himalayan Region - an Economic Analysis
M. F. Bari, A. B. M. Badruzzaman, M. S. Alam, M. M. Hoque, M. Saha, T. Huber, B. Fliedl & M. A. Rahman	Results and Consequences of the ASSESS-HKH Research Project in Bangladesh
S. Sharma, R. M. Bajracharya, H. Neesemann, R. D. Tachamo, D. N. Shah & S. Timalina	Results and Consequences of the ASSESS-HKH Research Project in Nepal
U. C. Chaube, S. Sharma, P. Sharma & P. Kumar	Water Quality Assessment of River Satluj Using Benthic Macroinvertebrates
V. Syrovatka, K. Brabec, T. Korte, W. Graf, H. Neesemann, K. Petrivalska, T. Huber, A. Hartmann, R. D. Tachamo, D. N. Shah, M. S. Alam, M. M. Hoque, M. Saha, A. Aziz, S. Sharma, G. K. Chhopel, S. Tomanova & K. Kubosova	The Effect of Environmental Conditions on the Taxonomic and Functional Structure of Benthic Macroinvertebrate Communities in the Hindu Kush-Himalayan Region
J. B. Ranjan & S. Aava	Variation in Time and Gear in the Fish Assemblage of the Rivers Flowing Through Chitwan National Park and its Latest Update

Author(s)	Title
C. M. Sharma, B. O. Rosseland & R. Borgstrøm	Effects on Population Density and Mercury Concentration in the Northern Pike (<i>Esox lucius</i>) in Lake Årungen After Manipulation of a Top Predator
A. B. M. Badruzzaman, M. F. Bari, M. S. Alam, M. M. Hoque, M. E. Habib & M. Saha	Effect of Thermal Effluent Discharge on the Macro-Invertebrate Abundance in the Sitalakhya River in Bangladesh
M. Shrestha, B. Pradhan, A. Hoffmann, G. K. Chhopel, M. F. Bari, M. A. Khalown, M. P. Sharma & S. Sharma	River Water Quality Pressures, Impacts, and Policies in the Hindu Kush-Himalaya
P. Akolkar, S. Agrawal & R.C. Trivedi	Biological Monitoring of Water Quality in India – Needs and Constraints
M. S. Alam, M. M. Hoque, M. F. Bari, A. B. M. Badruzzaman, T. Huber & B. Fliedl	Aquatic macroinvertebrate as Bio-indicator: A New Approach for River Water Quality Assessment in Bangladesh
M. Shrestha, B. Pradhan, A. Hoffmann, G K. Chhopel, M.F. Bari, M.A. Khalown, M.P. Sharma & S. Sharma	River Management Strategy in the Hindu Kush-Himalayan Region
M.P. Sharma & A. Kumar	Sustainable Water Resources Management Strategies in India
S. Arora	Water Resource Management in Foothills of N-W Himalayas of India for Sustainable Farming : An Overview
A. K. Majumder, Md . A. J. Chowdhury, Md. N. Islam, Md. E. Hossain, Md. Sarwar & R. Saha	A Study on Water Quality Parameters of Karnafully River of Bangladesh
M. P. Sharma, V. Goel & A. Kumar	Water Quality Mapping of Kosi River Using Benthic Macroinvertebrates
M. Shrestha, B. Pradhan, D.N. Shah, R. D. Tachamo, S. Sharma & O. Moog	Water Quality Mapping of the Bagmati River Basin, Kathmandu Valley
K. Brabec, S. Tomanova, V. Syrovatka, K. Petrivalska, O. Moog, D. Hering, S. Sharma, L. Miserendino, N. Moya, R. Rozkosny, T. Soldan, W. Graf, T. Korte, A. Schmidt-Kloiber, R.D. Tachamo, K. Kubosova & J. Jarkovsky	Comparison of Macroinvertebrate Feeding Strategies in Streams From Asia, South America and Europe

3 SPECIAL ISSUE

To further increase the accessibility of the project’s results and the awareness in the scientific community papers in international scientific journals will be produced. Some of them will separately be submitted to the most appropriate journals, however,

we aim additionally at a special issue summarising the main results for the scientific community. Two journals (*Limnologica* and *Hydrobiologia*) have been contacted and both expressed great interest, as there little information is available on rivers in the Hindu Kush-Himalayan region and the special issue will be the first peer-reviewed sample publication on this topic. The final decision on which journal to choose depends on the outcome of negotiations with the editors-in-chief of both journals, which are yet not finalised.

In any case, the special issue will be prepared according to international scientific standards. A board of guest editors will be formed by three of the senior scientists of the consortium (Otto Moog, Subodh Sharma and Daniel Hering). Deadline for the submission of manuscripts will be in summer 2008 (precise data to be set), and afterwards there will be a peer-review process with external experts. Only manuscripts fulfilling the quality standards of the targeted journal and approved by the reviewers will be considered for publication. We expect a publication in 2009. Presently 16 manuscripts (11 directly resulting from ASSESS-HKH plus five external manuscripts) have been planned (Table 2).

Table 2: Planned manuscripts for the special issue on ASSESS-HKH results

Author(s)	Title
O. Moog, I. Stubauer et al. (representatives of all HKH partners)	The ASSESS-HKH project: context, objectives and approach
A. Hoffmann, M. Shrestha, B. Pradhan et al.	Water quality policies, pressures, and impacts in the Hindu Kush – Himalaya
M. Shrestha, B. Pradhan, A. Hoffmann et al.	Policy recommendations for sustainable water management in the Hindu Kush - Himalayan Region
K. Brabec, T. Korte, W. Graf, H. Nesemann, R.D. Tachamo, D. N. Shah, A. Aziz, S. Sharma et al.	Structure of the macroinvertebrate communities in the HKH region: Functional structure, environmental preferences and the impact sensitivities
NN	The ASSESS-HKH data set – sampling design, content and taxonomic resolution
O. Moog, A. Hartmann & S. Sharma	Screening methodology for the streams in HKH region
T. Ofenboeck, S. Sharma, O. Moog, G. K. Chhopel, S. Alam et al.	Development and application of HKHbios in the Hindu Kush-Himalaya
T. Korte, A.B.M. Baki, T. Ofenboeck & D. Hering	Development of Multimetric index for application in the Hindu Kush – Himalaya
T. Korte & D. Hering	Habitat and current preferences of the macro-invertebrates in

Author(s)	Title
	the Hindu Kush – Himalaya
O. Moog, S. Sharma et al.	Species Inventory of the Macro-invertebrate fauna in the Hindu Kush – Himalaya
M. T. Barbour	The Societal Benefit of Biological Assessment and Monitoring in Rivers
C.M. Sharma B.O. Rosseland & R. Borgstrøm	Manipulation of a top predator, the northern pike (<i>Esox lucius</i>) in Lake Årunge: effects on population density and mercury concentration
B. O. Rosseland, R. Borgstrøm & C. M. Sharma	Fish as a biomonitor for environmental pollution in high mountain areas
I. Jüttner	Diatoms as bioindicators in the Hindu Kush – Himalaya region
A. Sood, P. Pandey & S. Sharma	Assessment of bacteriological quality of Gangetic river system of Uttarakhand
K. Brabec	Comparison of macroinvertebrate feeding strategies in streams from Asia, South America and Europe