INFORMATION FOR COMPLETING THE SEDIFLUX DATABASE PROJECT, STUDY SITE AND MEMBER INFORMATION FORMS

Background:

The European Science Foundation (ESF) Network SEDIFLUX (Sedimentary Source-to-Sink-Fluxes in Cold Environments) was approved by the ESF Network Group in November 2003 for a three-year period (01.01.2004 – 31.12.2006).

The aim of this Network is to perform the quantitative analysis of sediment transfers in cold environments that has been lacking so far. Such an analysis clearly depends on the level of climate change expected. However the major focus of this Network is on the impact on sediment transfer processes of a variety of climate change scenarios and is therefore concentrating on the sediment flux processes from source to sink. To realize a sufficiently integrated study of source-to-sink sediment fluxes in cold environments, this Network is analysing the key processes of weathering, chemical denudation, erosion, mass movements, fluvial transport, and sedimentation in lakes and coastal areas. Bringing these different weathering, transfer and sedimentation processes within one broad field of study requires collaboration between a variety of specialists working in the respective subjects. This Network is bringing together both leading and young scientists in these fields, and creating a unified approach that will take research forward within the specific focus of climate change impact on the surface.

One of the strengths of this Network is the wide variety of scientific fields being harnessed, including physical geography, quaternary geology, oceanography, limnology, climatology, civil engineering, paleobiology, and ecology. The Network will also consider the impact of human activity on the environmental sites being studied and how this might relate to climate change. Another important aspect to consider is the possible impact of climate change on the soil carbon budget. If global warming led to a net release of carbon into the atmosphere from the Earth`s surface, this could have a positive feedback accelerating in turn the warming process.

The Network is meant to build on existing or earlier work carried out both within Europe and elsewhere in different study areas. Indeed the large number of current related research

projects, funded by a wide variety of agencies, highlights the interest already in this field. The Network shall take this opportunity both to strengthen the existing ties and build up new collaborations within Europe and reaching out to other parts of the world. It will also stimulate research in parts of Europe such as Poland and Russia where activity has been low in the recent past.

It is necessary to collect and to compare data and knowledge from a wide range of different high latitude and high altitude environments and to develop more standardized methods and approaches for future research on sediment fluxes and relationships between climate and sedimentary transfer processes. In Europe the wide range of high latitude and high altitude environments provides great potential to investigate climate-process relationships and to model effects of climate change by using space for time substitution.

A strong monitoring and operational data collection and more standardized methods will provide a baseline for the development of reliable models and for future research in the changing cold environments.

First steps to do:

As a first step within the ESF SEDIFLUX Network we would like to ask all SEDIFLUX members to spend some time and to provide some information on:

1) Their ongoing and recently completed projects which are scientifically related to SEDIFLUX (see Form A)
2) Their present study sites (see Form B)
3) Their contact addresses, web-addresses, research interests, research areas, etc. (see Form C)

Submissions will be used solely by the SEDIFLUX Steering Committee for compiling of a SEDIFLUX project, study site and member database which will be accessible from the SEDIFLUX webpage (to be installed, developed and up-dated by the SEDIFLUX Co-ordinator).

Please use one separate copy of the forms A, B and C (see below) for each project, study site and SEDIFLUX member description and send the completed forms electronically

to the SEDIFLUX Co-ordinator:

Achim.Beylich@ngu.no

Please keep descriptions short. Each completed form (A, B, and C) should not be longer than two A4 pages.

The members of the SEDIFLUX Steering Committee thank you very much for your co-operation.

Sincerely yours,

Achim A. Beylich (SEDIFLUX Co-ordinator, Trondheim, Norway)
Samuel Etienne (Clermont-Ferrand, France)
Bernd Etzelmüller (Oslo, Norway)
Vyacheslav V. Gordeev (Moscow, Russia)
Jukka Käyhkö (Turku, Finland)
Hugues Lantuit (Potsdam, Germany)
Andrew J. Russell (Newcastle, UK)
Karl-Heinz Schmidt (Halle/S., Germany)
Þorsteinn Sæmundsson (Sauðárkrókur, Iceland)
Fiona S. Tweed (Staffordshire, UK)
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