

Preface

Three Years of SedNet

Jos Brils, SedNet coordinator

TNO Environment, Energy and Process Innovation (TNO-MEP), P.O. Box 17, 1780 AB Den Helder, The Netherlands
(j.m.brils@mep.tno.nl; <http://www.SedNet.org>)



The main issue that drove the initiation of the European Sediment Network SedNet was the recognition that research on sediment is *fragmented*. A fragmentation which is also found in the many policies and regulations which only address parts of the sediment management issues faced by stakeholders. The latter was felt to be due to a lack of *awareness*. The approval by the European Commission of SedNet as a Thematic Network project¹ made it possible to raise awareness to these issues and to address knowledge development through a more structured approach, involving scientists, stakeholders and policy makers.

Structuring of knowledge development

At the start of SedNet it was felt that the development of knowledge needed for sediment management was too fragmented, that 'wheels were being reinvented'. In order to address sediment management issues in a more integrated and comprehensive approach, we prepared the SedNet 'Strategy Paper' <<http://www.SedNet.org>>. As part of the strategy, specific management issues were addressed by four dedicated SedNet Work Packages (WP):

- **WP2 Sediment management at the river basin scale**, moderated by PHILIP OWENS, National Soil Resources Institute, Cranfield University, UK (Philip.owens@bbsrc.ac.uk)
- **WP3 Sediment quality and impact assessment**, moderated by DAMIA BARCELÓ, IIQAB-CSIC, Dept. of Environmental Chemistry, Barcelona, Spain (dbcqam@cid.csic.es)
- **WP4 Sediment and dredged material treatment**, moderated by GIUSEPPE BORTONE, Regione Emilia-Romagna, Bologna, Italy (gbortone@regione.emilia-romagna.it)
- **WP5 Sediment risk management and communication**, moderated by Susanne Heise, Technical University Hamburg-Harburg, Hamburg, Germany (s.heise@tu-harburg.de)

Furthermore, SedNet WP1 (lead by myself) dealt with the network co-ordination, dissemination, further improving of the network structure and stakeholder issues.

Top-level scientists and major stakeholders were invited and contributed to the three to four workshops organised by each WP. The reports of the outcome of the individual workshops can be found at our website <<http://www.SedNet.org>>. A synthesis of the WP discussions, and a list of the core-people contributing to those discussions, is for each WP described in this special issue of JSS [1].

Based on the WP discussions, it was possible to come with a set of research recommendations that can be found at our website at <<http://www.sednet.org/newsitem.asp?ni=87>>. The discus-

sions lead to recommendations for policy making and sediment management. An overall document that synthesises the outcome of SedNet activities is currently being elaborated by WP1 and will be ready by the end of the year. The scientific state-of-the-art formed the basis for all discussions. Several SedNet members have underlined the special association between SedNet and JSS by choosing JSS as preferred journal to publish their scientific papers on issues debated in SedNet (see previous issues of JSS). A complete description of the scientific state-of-the-art, as reviewed by SedNet, will be commercially available in four SedNet books. The books, having the titles of the SedNet WPs, are published by Elsevier in the 2nd part of 2005.

SedNet also helped in other ways to structure knowledge development in Europe. Several scientists and stakeholders used the SedNet workshops and conferences to find each other for the preparation of sediment oriented research proposals. A number of SedNet sediment experts, for example, now cooperate in the 6th Framework Program Integrated Project AquaTerra (see: <<http://www.eu-aquaterra.de/aquaterra/>>). SedNet organised a joint workshop with NICOLE (Network for Industrially Contaminated Land in Europe) in order to address the question whether sediment is an issue for industry. The outcome: it is! (see: <<http://www.nicole.org/publications/library.asp?listing=1>>). Furthermore, contacts at SedNet events helped to initiate or further stimulate the formation of national sediment networks (e.g. Spain and the UK).

Raising awareness

Another reason for starting SedNet was to raise awareness to sediment management issues, especially at the European policy makers level. The European Water Framework Directive (WFD) aims to harmonise water legislation in EU countries and focuses on the management of water at the river-basin scale. In the opinion of SedNet (see: <<http://www.sednet.org/newsitem.asp?ni=87>>) it thus gives the best possibility for integration of a more direct and less fragmented focus on sediment management. Stimulated by the WFD, the view on sediment is changing to the recognition of the key role that sediment plays naturally in the functioning of river systems. Sediment management should fit into the holistic view of the role of sediment in river basin systems. The WFD, therefore, represents an enormous opportunity and stimulus to come up with guidance for sustainable sediment management. The current scope of the WFD does not yet cover this subject in a clear way. Sustainable sediment management should eventually become an integrated part of the WFD.

Let me give one example that illustrates the need to address sediment issues at a basin scale. At the moment there exists no European regulation or strategy to adequately manage the

¹ Project acronym: SedNet; EC contract No.: EVK1-CT-2001-20002, EC 5th RTD Framework Programme; key-action: 1.4.1 'Abatement of water pollution from contaminated land, landfills and sediments'.

flow of contaminated sediment in our rivers. Thus the largest part of the contaminated material is flushed to sea, without significant hindrance. However, dredging, and relocation of dredged material further down the river or at sea, is in several countries subject to stringent regulations. The stakeholder in question faces the extra costs involved for dealing with the dredged material that is considered too contaminated to be relocated. Why has that single stakeholder to bear these extra cost as he is not responsible for the contamination? It should be a problem to all along the river who contributed to the contamination. As so many people are involved then, and because their individual contribution is often untraceable, it makes perfect sense to deal with this issue as a common European issue.

SedNet experts were invited to join EU policy expert group discussions where they also raised attention to the SedNet viewpoints. However, from these discussions it became clear that there is an enormous time pressure on trying to implement what is already described in the WFD. It is my impression that better attention to sediment management maybe puts a too high burden on this time frame at this stage. But if we do not start with integration of sediment right now, will it then not even be more difficult to properly integrate it in the near future?

Future

SedNet can play a role in joining efforts to address, in my opinion, one of the biggest scientific challenges: improve our understanding of cause-impact relationships. The WFD aims at reaching a good ecological status in all European waters by the year 2015. Wherever a bad ecological status exists, e.g. indicated by a poor diversity and abundance of benthic

invertebrates, the question will arise to which extend this is due to sediment contamination. A proper answer to that question is needed in order to be able to decide whether sediment remediation might help to improve that status.

SedNet formulated its mission as to be a European network for environmentally, socially and economically viable practices of sediment management at the river basin scale. Guiding principles were developed for that (see the SedNet strategy paper <<http://www.SedNet.org>>). Through the three years of SedNet we have established a strong knowledge base on contaminated sediments in Europe. However, from the beginning we realised that quality and quantity are strongly interlinked, hence we will use SedNet to forge and intensify contacts with other networks. With NICOLE we already carried out a joint workshop. UNESCO's recent International Sedimentation Initiative (see the paper of Spreafico and Bruk in this issue of JSS [2]) intends to bring together the global expertise on sediment fluxes. As such SedNet is a natural partner by contributing its extensive knowledge on quality aspects.

Finally, SedNet should continue its efforts to raise awareness to sediment management issues and further strengthen its role as a respected, independent platform were policy makers and other stakeholders can ask for expert advice on these issues.

References

- [1] Synthesis of the SedNet Work Package 2-5 Outcomes (2004): JSS – J Soils & Sediments 4 (4) 219–238
- [2] Spreafico M, Bruk S (2004): UNESCO's International Sedimentation Initiative. Background and Current Status. JSS – J Soils & Sediments 4 (4) 217–218

International Sedimentation Initiative (ISI)

UNESCO's International Sedimentation Initiative

Background and Current Status

Manfred Spreafico¹ and Stevan Bruk²

¹ Federal Office for Water and Geology, Swiss National Hydrological Survey (manfred.spreafico@bwg.admin.ch)

² UNESCO, Science Sector (retired) (s.bruk@unesco.org)
<www.unesco.org/water/ihp>

Introduction

The International Sedimentation Initiative (ISI) has been launched by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), as a major activity of the current Sixth Phase (2002–2006) of the International Hydrological Programme (IHP)¹. In justifying the resolution, the Intergovernmental Council noted that:

- i) Erosion and sedimentation processes and management in catchments, river systems and reservoirs are increasingly important in all parts of the world,
- ii) Erosion and sedimentation processes have significant socio-economic and environmental impacts in river basin management,

- iii) Sediment production processes are not sufficiently understood for practical use, while various sediment transport models are available,
- iv) Within the next few decades more than 50% of the world's reservoir storage capacity may be lost due to sedimentation, and realizing that appropriate storage sites of water are limited,
- v) Sediment management practices should be improved.

What is the mission of ISI?

The International Sedimentation Initiative is expected to add a new dimension to ongoing efforts aiming at sustainable sediment management, in the context of sustainable water resources development at global scale.

Hence, its mission directly relates to the commitments of the international community expressed in major documents such

¹ Resolution XV-8 of the Intergovernmental Council, Paris, 17–22 June 2000

