

**SETAC Sediment Advisory Group**  
**Scope, Purpose and Operating Guidelines**  
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**Introduction**

Sediments are an integral part of the aquatic ecosystem. They provide habitat for a large number of benthic micro- to macrofauna (organisms that live all their lives or during specific times in their life cycles at the bottom of rivers, lakes, estuaries, lakes and marine waters). Major biogeochemical processes take place in sediments. As with ecosystem and hydrological functions in the water column, the functioning of sediments has been impaired by contaminants and other anthropogenic impacts over decades. Like river waters, sediments are transported downstream, albeit often at slower rates, crossing political and regulatory boundaries. Hence, sustainable management of sediments requires a river basin approach.

Whilst water reflects a transient signal of contaminants at a given time, sediments can accumulate and are able to store adsorbed contaminants for long time periods. Processes governing bioavailability and biomagnification of sediment-bound contaminants are not fully understood. This lack of understanding, along with the longer time scales of contaminant retention and transport in river basins can complicate the identification of polluters and thus the determination of responsibility and liability. Sediments can accumulate in slow and still water zones such as reservoirs, harbours and bays, resulting in loss of water depth,, loss of capacity and increased navigational barriers, thus causing a potential economic impact as well as posing potential human and ecological risks. Therewith, sediment risk assessment and management has gained continuing attention from the academic community, regulators, and from different economic sectors, (e.g. port authorities). Even though the environmental importance of sediments has been recognized by environmental agencies worldwide, the European Water Framework Directive, for example, implemented in 2000 to achieve a good status of all surface waters by 2015, has not identified the contaminant-carrying property of sediments as a major issue. Improvements to water quality will be limited if sediment quality is not also improved. Major concerns with regard to environmental quality guidelines comprised lack of harmonization, representativeness and traceability of sediment data.

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Until recently, most regional sediment risk prioritizations and site-specific sediment Ecological Risk Assessments (ERAs) have focused primarily on the risk of contaminants in sediments on associated organisms. Occasionally, some food chain effects are explicitly or implicitly addressed, but rarely are contaminated sediments assessed within an overall

ecosystem model. Sediments figure extensively in the Millennium Ecosystem Assessment, but contaminated sediments are not the dominant issue. Rather, habitat change and loss, due to changes in sediment inputs, whether reductions (resulting in the loss of beaches, storm protection, nutrient inputs, etc.) or increases (resulting in lake, reservoir and wetland infilling, coral reef smothering, etc). Eutrophication and reductions in nutrient inputs, and disturbance to due development and fishing practices were major drivers, with significant consequences for biodiversity and ecosystem function. For example, hard bottom and soft sediment seafloor habitats are severely impacted by fishing methods such as bottom trawling and dredging. Because of the high biodiversity of benthic ecosystems in freshwater, estuarine and marine systems, and their global significance in the critical ecosystem processes of cycling and storage of carbon and nutrients, there is evidence that the extensive impacts of fishing and other activities on benthic communities may have important ramifications for ecosystem function and resilience. It is expected that the SETAC Sediment Advisory Group (AG) will help in broadening this perspective in sediment assessment and management.

The SETAC Sediment Advisory Group (SEDAG) was originally established in Europe to advance the science and understanding of sediment in the environment. It has been initiated by members from SETAC and SedNet, the European Sediment Research Network, interested in approaches for assessing and managing sediment.

Membership of the Sediment AG is open to all SETAC members as well as to all professionals interested in the topics addressed by SEDAG. Members of the SEDAG steering committee are required to be members of SETAC

### **Introduction to SETAC**

SETAC ([www.setac.org](http://www.setac.org)) is a non-profit professional society founded to promote the use of multi-disciplinary approaches in the study of environmental issues. SETAC represents nearly 5000 environmental toxicologists, chemists, risk assessors, and engineers worldwide. The Society was founded on the principle that it is important to have a membership comprised of equal representation of persons from academia, industry, NGOs, and government agencies. SETAC members are involved in diverse areas, such as education, research, environmental management, manufacturing and distribution of products in commerce, and regulatory activities.

### **Science Advisory groups**

The establishment of Advisory groups is based on defined needs with regard to a specified topic. They have open-ended time frames of operation, are relatively broad in scope, and will manage processes to advance the science and application of a specific topic. The group should intend to be recognized as an authoritative expert in its field.

### **Scope**

The scope of SEDAG comprises environmental aspects of quantity and quality of sediments, both as deposits and as suspended matter in freshwater, estuarine and marine environments. Scientific coverage of SEDAG includes all fields pertinent to conducting effective environmental risk assessment and management of sediment, including issues such as transport, fate, exposure, effect, impact analysis, guideline values and frameworks (regulations), and management strategies. Where necessary, the adjoining compartments like soil, water, groundwater, air will be considered and contacts with advisory groups like the established SETAC Soil Advisory Group will be established. SEDAG, through its broad membership, will aim for cooperation and exchange with international sediment-related organizations such as the European Sediment Network "SedNet", the Sediment Management Work Group, the Sediment Remediation Technology Development Forum, providing a strong link to application.

### **Mission and Purpose**

SEDAG exists to serve as a scientific resource to all stakeholders interested in the topic of sediments in the environment, and fulfills the following mission and purpose:

- Serve as a focal point within SETAC as a means of involving the membership in research and discussions.
- Stimulate critical assessment in order to establish the best available science.
- Encourage the worldwide incorporation of the best available science and strategic approaches.
- Advance overall understanding of the fate, effects, and potential environmental consequences of contaminated, altered or redistributed sediments.
- Provide scientific support to facilitate effective regulatory decision making.
- Provide a neutral forum and focal point for collaborative identification, evaluation, and resolution of scientific issues.
- Provide a forum for organizing sessions at annual meetings and organizing workshops to address scientific issues associated with the assessment and management of contaminated sediments.
- Provide a mechanism to publish journal articles and books associated with the assessment and management of sediments.

### **Roles and Responsibilities of the Sediment Advisory Group (SEDAG)**

To achieve its mission and purpose, the activities of SEDAG will include:

- The organization of temporary "projects" in order to extensively elaborate on a specific task suggested from interested parties within or outside of the group.
- Preparation of technical papers (general information, issue specific)

- Developing a specific area of the SETAC web site for SEDAG
- Developing an active presence in the SETAC community forum
- Holding targeted (subject specific) discussion groups at annual meetings or workshops.
- Implementing short courses, for example in advance of either SETAC or other conferences.
- Presentations to government agencies.
- Publishing news and information in the SETAC Globe
- Publishing papers in the SETAC journals or in SETAC books.
- Providing educational materials for the public and school systems.

### **Operating principles**

1. SEDAG is a consensus-based group, and uses a consensus-based decision-making process.
2. By linking SETAC and other sediment groups internationally, SEDAG will be aware of and foster discussions that take place in the SETAC society and the sediment community overall, as well as combining expertise and experience from various organizations. The links will be established primarily by personal interaction and exchange of documents. It is anticipated that there will be liaisons and interactions with government and non-government organizations interested in sediments.
3. An effort will be made to maintain an equal balance on the Sediment AG Steering Group among academia, government, business, and non-profit sectors.
4. The Sediment AG plans to hold meetings during the SETAC North America Annual Meeting, the SETAC Europe Annual Meeting and at the World Congress events. .
5. SEDAG encourages the volunteer nature of SETAC. SETAC believes that, in order to progress, it is important to have individuals present at meetings. As such, SETAC recognizes that individuals occasionally might need to obtain subsistence on a case-by-case basis. Approval of such will be granted on a need basis subject to funds being available and granted by the SETAC office.
6. The community forum will be considered for communication among members, exchange of documents and discussion of current topics.
7. The steering committee for the SEDAG will establish ground rules to address how the steering committee and full AG work together. The Sediment AG steering committee and SEDAG itself agree to work together in the following manner in order to accomplish the SEDAG mission and purpose:
  - I. Maintain Respect for People
    - Listen fully
    - Test your understanding of assumptions
    - Problem solve together
    - Be tolerant of each other's perspective
    - Be open, honest, and candid
    - Respect confidentiality

- Be mindful of the complexities presented by conference calls
  - work to be inclusive of the full membership
- II. Conduct organized meetings
- Utilize a written agenda (old business, new business, ongoing business)
  - Start and end meetings on time
  - Come to meetings prepared - review pre-meeting reading materials
  - Publish minutes as soon as possible following meetings
  - Stay focused on the topic
  - Utilize a reminder system to return to issues that arise
- III. Operate effectively
- Do not over promise and under produce
  - Follow through on meeting action items
- IV. Decision Making: Use consensus as the primary decision-making approach
- Test for consensus before moving ahead with the agenda
  - Manage challenges consistently. Use the following process:
    - Identify the issues
    - Identify and verify the basis of any conflicts
    - External consultation and independent assessment
    - Focus on the science to seek consensus
    - External review and appraisal
    - In cases where consensus cannot be achieved, clearly indicate the issue and outcome in the minutes

### **Funds**

Funding for the various activities during the SETAC conferences is through SETAC, which is a non-profit 501(c)(3) organization. SEDAG, under the auspices of the SETAC world council, will manage its funds.

### **Budget**

An annual budget will be prepared by SEDAG. This budget will be submitted for inclusion in the overall annual budget for SETAC.

### **Oversight**

The SETAC World Council will provide regular review of SEDAG, including the Steering Committee structure and activities, and, if necessary, will offer guidance to ensure compliance with established policy.

SEDAG will regularly report the activities of the SEDAG to the SETAC World Council and to the SedNet Steering Group.

### **Program, task forces, and working committees**

The SETAC Office serves as a coordinator of AG activities while SEDAG-related activities specific to other sediment organizations will be coordinated by those organizations, in communication with SETAC. SETAC and collaborating sediment-related organizations will disseminate Sediment AG activities in their respective newsletters.

### **Advisory Group Steering Committee membership**

Membership of the Steering Committee is intended to achieve balance and will follow the basic SETAC guidelines, with representation from academia, industry, government, and non-profit organizations. The Steering Committee will comprise no less than eight and no more than fifteen individuals. Balanced representation from the various SETAC geographic units should be made to the extent possible.

The President of the SETAC World Council, based on consultation with SEDAG members, appoints the chair of the SEDAG Steering Committee from among the Steering Committee members.

Sediment AG Steering Committee members must be SETAC members. Sediment AG Steering Committee members will serve two-year terms. Any steering committee member should serve only for two consecutive terms, after the term of the founding Sediment AG Steering Committee. The founding SEDAG Steering Committee will serve a two- or three-year term starting in January 2008. At the end of two years, the founding Sediment AG Steering Committee will be revised to ensure a turnover of approximately one-third members per year. The term on the AG Steering Committee will be tied to calendar years. A Steering Committee member that has 3 un-excused absences on Steering Committee conference calls will be removed from the Steering Committee.

Members of the Steering Group are elected by an electronic ballot of the members of the AG. When new members are to be voted to the Steering Committee, the SETAC office or the Steering Committee will announce the vacancy to the members of the AG at least four (4) months prior to the appointment date. Anyone who fits (1) sector category (academia, industry, NGO, government), (2) has institutional or personal support, (3) has expertise or interest in SEDAG-related environmental issues, and (4) has a commitment to the mission and operating guidelines of SEDAG can express their interest in being considered for appointment to the SEDAG Steering Committee. A name must be placed into consideration at least one (1) month prior to the appointment of new members.

In instances where a SEDAG steering committee member must leave before completing his/her term, and when there are more than six months remaining in the term, the SEDAG Steering Committee will identify individuals from the departing member's sector to fulfill the

term. Individuals will be identified to the SEDAG steering committee at least two weeks prior to the appointment of the replacement.