

INTRODUCTION TO SCIRIC AND THE TOPIC

The list of SETAC advisory groups clearly reflects SETAC's ambitious mission to promote Environmental Quality through Science®. Through SETAC advisory groups, members aim to advance high quality research, yet these efforts are often only communicated within the SETAC community and not to decision makers or the general public. Failure to engage the general public negates these efforts and our research, which covers a multitude of environmental issues. Connections between “the laboratory” and “the public” of course exist, e.g., through institutional press offices, and web sites which often succeed at announcing important findings through general news outlets. However, crucial questions remain:

- How is the public perceiving the research that can influence political discourse and decisions?
- Are scientific results that can provide important information for decision making reaching an appropriate audience in a timely manner?

Communication means to convey meaningful information to create shared understanding. This means that the messages generated to explain topics in environmental science need to be clear and easily understood. We as scientists and researchers need to confirm that our efforts have been well received. It is insufficient to merely distribute scientific facts. Effective communication and engagement with an interested public are crucial.

There are growing public concerns about environmental and personal chemical risks. Environmental science exists because there is an awareness that human activities have consequences, often unforeseen, for example acid rain and its impacts on forests, or how different chemicals interact in the environment (see Rachel Carson’s pioneering report “Silent Spring”). Environmental sciences are at the heart of what people deal with in their daily lives: environmental quality, food safety, clean air, fresh water, human health. Why aren't the results of our work in their daily thoughts? How can they get there? People make numerous decisions that could be supported by knowing the outcomes of our research.

SCIRIC members believe that proper training of environmental scientists in science communication can eventually increase awareness, interest, comprehension and appreciation for environmental research. We want to base such training on a strong theoretical foundation that recognizes the specific aspects and requirements of environmental research. Our vision is a true participatory role of the public in environmental sciences, thus strengthening the impact of the SETAC community on societal development as well as political processes.

THE SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY – SETAC

SETAC (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 6000 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, business, 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.

SETAC Europe is one of five Geographic Units (GU) of the global Society of Environmental Toxicology and Chemistry (SETAC), established to promote and undertake activities of SETAC in

SETAC Europe AG SCIRIC – Scope, Purpose and Operational Guidelines

Europe, and to support activities of SETAC in the Middle East and Russia. SETAC Europe shares the mission of SETAC.

SETAC 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 OF SCIRIC

The Advisory Group on science and risk communication works to fundamentally improve the way dissemination of scientific findings is regarded and carried out within the researcher's community of SETAC and beyond.

MISSION AND PURPOSE OF SCIRIC

The mission of this group is to collate expertise and experience on communication within SETAC to establish the communication of scientific findings as an essential aspect in environmental and ecotoxicological science and research. This advisory group aims at providing SETAC scientists with state-of-art communication practices, tools, and strategies so that they can optimize their outreach to researchers in other scientific disciplines, stakeholders, agency representatives or employees, politicians, members of the media (or journalists) and the general public.

ROLES AND RESPONSIBILITIES OF SCIRIC

The advisory group tackles the fundamental questions regarding science and risk communication of environmental research:

- How can we make science and risk communication more trustworthy? How can we improve science and risk communication with the general public?
- What stories find their way into the media? Is it necessary to express our work in terms of disasters? Is it possible to tell positive stories and still show the relevance of our topics?
- How can environmental scientists work together with social and political scientists and communicators? What can we learn from each other?
- What are the specific information needs of and communication formats for the single target groups (e.g. public, media, stakeholders, agency representatives or employees, politicians)?

We are working to sustainably improve the dissemination of scientific findings within the researcher's community of SETAC and beyond. We are:

- Collating expertise and experience on science and risk communication within SETAC to identify those colleagues capable of advising others and giving input to SCIRIC.
- Identifying the special requirements of communication of environmental sciences.
- Initially reviewing current science and risk communication practices and developing methods, tools, and strategies tailored to the special requirements of environmental sciences.
- Regularly reviewing the state-of-art in communicating science and adapting as well as developing novel concepts for a successful outreach of environmental research.
- Emphasizing the importance of communicating research to all parts of society as an integrated part of environmental science.
- Establishing trainings for SETAC members and providing those interested in science communication tools and strategies to succeed.

SETAC Europe AG SCIRIC – Scope, Purpose and Operational Guidelines

For all our activities we consider the tripartite structure of SETAC to ensure proper communication from and to all different parts of society. We furthermore seek to have representatives of all academic experience levels (from students to Professors) in the membership, and also include journalist members and members with backgrounds in education and policy, to integrate their views and perspectives.

All these measures are envisaged to strengthen the value and visibility of SCIRIC within SETAC and its community and getting SCIRIC members involved in consultancy on science and risk communication at the various levels of the science communication process.

Clear communications are necessary to every part of SETAC, and SCIRIC works closely with all advisory groups, committees and specific thematic communities as appropriate on a European and global scale. This leads to a large pool of properly educated and sufficiently committed environmental scientists communicating SETAC research to all different parts of society, developing and using target group-specific concepts, which strengthens SETAC's visibility and reputation in the public. An increase of societal and political impact of SETAC is expected as a result, helping to facilitate our vision of environmental quality.

Public Understanding of the Scientific Process

Our goal is to facilitate a development we call “Public Understanding of the Scientific Process” (PUSP). Public understanding of research is not only a matter of sufficient knowledge through comprehensive explanation, but also driven by personal concern and interests as a result of emotions and individual involvement and a certain code of values. Only a minority of scientists is aware of this and thus a large amount of dissemination activities and communication efforts often are still based on a scientist's monologue on facts. On the other hand, the interested public are given little chances to know how scientific research happens. Hence, even if they understand based on acquired knowledge, their view of science can be biased by their imagination of how science happens. SCIRIC develops principles and concepts for PUSP in environmental research.

Science communication as a fair process

The uncertainty in scientific findings is one of the main drivers for misunderstanding, distrust and consequently lack of interest or even opposition by the public. Allowing public access to the scientific research may help to alleviate these issues and better clarify why some results are vague and why uncertainty can remain. This approach is based on the fairness theory, which postulates that transparency of a process increases willingness to accept its outcome. According to the fairness theory people can better accept a negative outcome when they feel they know how a decision was made. In the perception by the public, scientific uncertainty can have a quality similar to that of a decision's negative outcome, since common expectations – as detailed above – would rather demand for clarity. We conclude that the public needs to directly participate in the scientific process. SCIRIC develops tailored strategies to increase transparency of scientific findings from environmental research.

Theatre-based communication

There are a variety of options available to scientists who embrace transparent communication - lab open houses, science slams, public lectures, video or traditional blogs, and submitting articles and interviews to popular media outlets. We develop and explore theatre-based communication, especially for the purpose of allowing behind-the-scenes access to science. Scientists as actors can play the role of their everyday working life, with all difficulties, decisions, discussions, and especially failures would highlight the reality of research. This realistic view of researchers and research encourages direct conversations and interactions between environmental scientists and the public. The goal of a theater-based approach to communication is to strip away the intimidation that high

level research topics may present to non-experts, and to make the research and researchers more accessible.

Communication with teachers and pupils

We suggest that scientists focus some communication efforts towards primary school pupils and teachers. Educating the next generations to take care of their environment and to consider anthropogenic contamination could significantly reduce diffuse pollution in future, thus enhancing environmental quality. In close cooperation with local teachers and pupils SCIRIC will develop concepts and strategies for activities especially aimed at schools, thus taking into account differences between regions and countries. This communication strategy takes a long-term approach and complements the natural interest and curiosity of children.

OPERATING PRINCIPLES OF SCIRIC

- (1) The SETAC Europe Advisory Group on Science and Risk Communication (‘SCIRIC’) is a consensus-based group, and uses a consensus-based decision-making process.
- (2) An effort is made to maintain an equal balance on the SCIRIC steering group among academia, government, business (industry and consulting), and non-profit or private sectors including media, and also strive for balanced geographic representation. Furthermore, to the best possible we will include all levels of academic experience.
- (3) SCIRIC plans to hold meetings during SETAC events.
- (4) SCIRIC encourages volunteer participation. It is important to have individuals present at meetings. SCIRIC members may request funding to attend annual meetings. Requests will be considered by the SETAC Europe Council and granted based on need and the availability of funds.
- (5) The community forum on the SETAC website is used for communication among members, exchange of information and documents, and discussion of current topics of interest to SCIRIC.
- (6) The steering committee for SCIRIC establishes ground rules to address how the steering committee and full AG work together. The SCIRIC steering committee and AG itself agree to work together in the following manner in order to accomplish the SCIRIC mission and purpose:

I. Maintain Respect for People

- Listen fully, keep it short
- Stay objective, do not get personal
- Test your understanding of assumptions
- Solve problems together
- Be tolerant of other perspectives
- Strive to reach an agreement
- 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

SETAC Europe AG SCIRIC – Scope, Purpose and Operational Guidelines

- Establish and maintain an updated strategic and operational plan for SCIRIC
- Do not over-promise and under-produce
- Follow through on meeting action items

IV. Decision Making: Use consensus as the primary decision-making approach

- Advisory group members are only asked to vote in the steering committee elections. Strategic decisions and corresponding votes are only made at the steering committee level
- Test for consensus before moving ahead with the agenda
- If no consensus can be reached, a vote is valid if more than 50 % of the current members of the steering committee (either personally or through their proxies) are present, and if more than 50 % of these members vote in favor (simple majority)
- Manage challenges consistently. Use the following process:
 - i. Identify the issues
 - ii. Identify and verify the basis of any conflicts
 - iii. External consultation and independent assessment
 - iv. Focus on the science to seek consensus
 - v. External review and appraisal
 - vi. In cases where consensus cannot be achieved, clearly indicate the issue and outcome in the minutes

BUDGET

SETAC Europe provides a budget to support standard operations of each SE Advisory Group, such as hosting conference calls, webinars and face to face meetings at annual meetings. The expenses and revenues are administered by the SETAC Europe office. Advisory Group budgets are included in the overall annual budget of SETAC Europe, to be approved by SETAC Europe Council.

OVERSIGHT

The SETAC Europe Council provides regular review of SCIRIC, including the steering committee structure and activities, and, if necessary, offers guidance to ensure compliance with established policy.

SCIRIC reports on its current and planned activities annually to the SETAC Europe Council. It informs other SETAC AGs, and other professional and learned societies as well as the whole SETAC membership through the SCIRIC website on setac.org.

SCIRIC STEERING COMMITTEE MEMBERSHIP

Membership of the steering committee is intended to achieve balance and follows the basic SETAC guidelines, with representation from academia, industry, government, and non-profit organizations. Additionally, with respect to the scope of SCIRIC, the steering committee strives to include media professionals and all levels of academic experience. The steering committee comprises no less than 8 and no more than 14 individuals. Balanced representation from the various SETAC geographic units should be made to the extent possible.

The steering committee chair is elected from the steering committee by majority vote from the other SC members. In case of one candidate only, the candidate is approved by acclamation in the SC. The elected candidate is finally approved by SETAC Europe President.

The SCIRIC steering committee members must be SETAC members. SCIRIC steering committee members will serve three-year terms. Any steering committee member should serve only for two consecutive terms, after the term of the founding SCIRIC steering committee. The founding SCIRIC steering committee will serve a three-year term starting from the SETAC Europe annual meeting in Nantes, France, in May 2016. After the initial three-year period, the founding SCIRIC steering

SETAC Europe AG SCIRIC – Scope, Purpose and Operational Guidelines

committee will be revised to ensure a turnover of approximately one-third members per year. The term on the SCIRIC steering committee will be tied to a 12 months period. The chairs (or nominated representatives) of the SETAC Europe Membership & Public Relations committee, of the SETAC World Communications committee, and of the Global AG on Sustainability, are invited to sit on the SCIRIC steering committee. Steering committee members are elected by the respective AG membership. There is no quorum for the elections of steering committee members, neither for the advisory group chair. Even elections with less than 50 % of the qualified votes are valid.

When new members are to be voted to the steering committee, the SETAC office will announce the vacancy at least four (4) months prior to the appointment date. Anyone who fits (1) the vacant sector category (academia, industry, government, NGO, media), (2) has institutional or personal support, (3) has expertise or interest in science and risk communication, and (4) has a commitment to the mission and operational guidelines of SCIRIC, can express their interest in being considered for appointment to the SCIRIC 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 SCIRIC steering committee member must leave before completing his/her term, and when there are more than six months remaining in the term, the SCIRIC steering committee will identify individuals from the departing member's sector to fulfill the term. Individuals will be identified to the SCIRIC steering committee at least two weeks prior to the appointment of the replacement.