

Best Practices for SCOR National Committees

The SCOR Executive Committee and Secretariat have compiled herein information about how different SCOR national committees carry out their duties. These provide guidance for all national SCOR committees. The SCOR Executive Committee and Secretariat recognize the rights and obligations of national SCOR committees to determine their own modes of operation. The comments of many national committees are used verbatim as submitted.

Membership in National Committees

Brazil—There are 3 members in Brazilian SCOR Committee. Membership is decided taking into account knowledge and geographic distribution. They do not rotate members regularly.

Canada—The Canadian National Committee for SCOR is composed of 10 members, including the Chair, the immediate Past Chair, the Secretary, and 7 others. Members represent, as far as is feasible, the full range of ocean science disciplines associated with SCOR initiatives. Make-up of the membership also takes into account the need to represent gender, the bilingual nature of Canada, geographic distribution of scientists, and representation from government, universities and the private sector. The membership is augmented by *ex-officio* members representing a range of agencies and related programs; presently *ex-officio* members include representatives for GLOBEC, IMBER, IAPSO, CMOS and its Scientific Committee, DFO and the international SCOR Executive. New members are proposed by existing CNC/SCOR members and the community at large. Final selection of new members is through the CNC/SCOR Executive Committee (the Chair, Past-Chair and Secretary), taking into account the criteria noted above; the final selection is ratified by the Department of Fisheries and Oceans (DFO). Members are appointed for a 3-year term that is renewable once, for a maximum of 6 years. New members are selected every year thereby assuring a mix of new and experienced expertise. The current membership of CNC/SCOR is posted at: <http://www.cmos.ca/scor/cncscormembership.html>.

China (Beijing)—There are 25 members of the China (Beijing) SCOR committee. They are nominated by their university or research institute.

China (Taipei)—The China (Taipei) SCOR Committee currently consists of 17 members of which 3 are Nominated Members. The members are appointed by the Academia Sinica for a period of three years. They are selected to represent the different oceanographic research institutes and SCOR-sponsored international research programs.

Denmark—The Danish SCOR Committee includes 11 members. The committee invites members in their personal capacity. Members are appointed for a 4-year period and can be reappointed.

Finland—Nine independent associations/scientific committees nominate ten representatives for four-year terms. There are general rules to regulate the operation of the committee.

Germany—The 20-person German *Senatskommission für Ozeanographie* serves as the German SCOR Committee. Members of this committee are appointed by the *Deutsche Forschungsgemeinschaft* (DFG, German equivalent of NSF) for a term of 3 years and may be

reappointed once.

India— The membership normally included 5-6 members, although there can also be special invitees. An office bearer (President/Vice President of Ocean Society of India) is a regular invitee.

Italy— The Italian SCOR Committee is presently composed by the 2 SCOR Italian Representative and by 6 members nominated by the Italian Oceanographic Committee (COI), belonging to the various Italian Institutions dealing with marine science. The SCOR Committee is also closely supported by an enlarged group of 7 scientists involved in various SCOR and IAPSO activities.

Japan— Japan National Committee for SCOR currently comprises 14 members from various fields of ocean sciences. Since JNC is under the Science Council of Japan (SCJ), all members need be either council members or members of SCJ. However, considering SCOR activities, JNC can introduce additional mission-oriented members up to the quorum 25. They are rotated every three years in accord to the SCJ's term but some are reassigned based on the SCJ's rule.

Korea—The Korean National Committee for SCOR is composed of about 10 members. The members are appointed for two years by the Korean Oceanographic Committee. Some members are chosen for their SCOR-related activities, such as SCOR working groups or SCOR-sponsored large-scale projects. Other members are chosen to represent ocean science disciplines that are not covered by existing members. In selecting new members, balance in representation from research institutes and universities is considered. Regulations are written for the operation of the committee.

Netherlands—The Netherlands SCOR Committee consists of 8-10 members appointed by the Board of the Royal Netherlands Academy of Arts and Sciences (KNAW) (based on suggestions by the Committee) for a period of five years, with the possibility of being renewed for another five years. The members represent the different oceanographic disciplines as well as the different universities and institutes conducting oceanographic research.

New Zealand—There are three members of the New Zealand SCOR Committee, the three Nominated Members. The members have not been rotated for more than 8 years and there is no formal way of appointing people.

Norway—The Norwegian SCOR Committee has 4 members, selected by the Norwegian Academy of Science and Letters, with no systematic rotation.

Spain—At present, there are three members of the Spanish SCOR Committee. A proposal for regulations of the Spanish SCOR Committee (RSSC), according to the guidelines given by the Spanish ICSU Committee, was sent in 2008 for approval to the Ministry of Science. Due to Ministry reorganization, however, there has been no response yet. These regulations state that the committee should have three to five members (1 President and 2-4 Members at large) and regulate the rotations.

Sweden—The Swedish SCOR Committee serves for IUGG and SCOR (this means that the committee is dominated by geophysicists). It has 17 members of which 3 are SCOR Nominated Members. All are appointed by the Royal Swedish Academy of Sciences for three years, and can be re-appointed.

Turkey—The Turkish SCOR Committee has 2 members, selected by The Scientific and Technological Research Council of Turkey, with no systematic rotation.

United Kingdom—New members tend to be suggested by existing members.

United States— The Ocean Studies Board of the U.S. National Academies of Sciences, Engineering, and Medicine serves as the U.S. National Committee for SCOR. Typically, the Ocean Studies Board has 20-22 members. New members are suggested by current members and staff of the Ocean Studies Board, and a broad call for nominations to the Ocean Studies Board. New members are selected by the Division on Earth Life Studies (the parent division of the Ocean Studies Board) subject to approval by the National Academies of Sciences, Engineering, and Medicine. Members are limited to two consecutive 3-year terms. The SCOR Representatives are three volunteer members of the Ocean Studies Board who take the lead on SCOR activities, including formal review of SCOR Working Group proposals.

Best Practices: National SCOR committees should be representative of national ocean science communities, with members from the major ocean science institutions, both academic and governmental. Members should also be considered from the private and non-profit sectors. In general, membership should extend beyond the three Nominated Members, except in the smallest nations, to ensure that the committee is representative of the national community. It is advantageous to include in membership of national committees individuals who are involved in SCOR working groups, SCOR-sponsored international research projects, or other SCOR activities. It could be advantageous to do an open call for members. National SCOR committees should establish a rotation system appropriate for their context, balancing the benefits of turnover and continuity. National Committees should appoint at least three Nominated Members.

Meetings of National Committees

Brazil—Two members of the Brazilian SCOR Committee are also members of the “Brazilian Sea Science Committee” (Comitê de Ciências do Mar) of the Brazilian Ministry of Science and Technology; they meet in person two times each year. In this meeting, they often talk about SCOR-related issues. They also “meet” by e-mail, but not very often.

Canada—CNC/SCOR is required to meet in person once per year for its Annual General Meeting (AGM), usually in conjunction with the CMOS Annual Congress. Occasionally, when needed for urgent decision making, CNC/SCOR meets by conference call between AGMs. Regular business throughout the year is conducted by email. Subcommittees of CNC/SCOR, for instance its *ad hoc* lecture tour committee, meet by conference call and by email.

China (Beijing)—The China (Beijing) SCOR Committee meeting is usually held once each year. The chair, vice chair and secretariat may have one meeting as well. There are communications by phone and email between in-person meetings.

China (Taipei)--The China (Taipei) SCOR Committee usually meets once a year at December to discuss SCOR-related activities and projects. In addition to that, the Chair and Secretary General send emails to other members regularly.

Denmark—The Danish SCOR Committee meets twice per year and email communication is used between meetings.

Finland—According to its rules, the Finnish SCOR Committee has one budgetary, compulsory meeting every year, plus they typically meet an additional three times each year. The chair, vice-chair and secretary also meet via phone and e-mail regularly.

France—The French SCOR Committee meets in person once annually, usually around the same time as the annual meeting of the Intergovernmental Oceanographic Commission, so that the SCOR President and Executive Director can participate in the meeting. The main task of the annual meeting is to discuss working group proposals.

Germany—The German SCOR Committee holds two 2-day meetings each year, in the spring and autumn.

India—The National SCOR Committee meets once each year, on ICSU day.

Japan— The official meeting of JNC is held normally two times a year. The maximum of three meetings are financially supported by the Science Council of Japan. The information exchange is basically conducted by emails between the official meetings.

Korea—Korean SCOR Committee meeting is usually held at least once a year. The meetings are financially supported by Korean Oceanographic Committee. Whenever new matters arise and meeting is not possible, the chair sends emails or make phone calls to discuss the matter.

Netherlands—The Netherlands SCOR Committee members meet only once each year, to discuss and rank the working group proposals and to inform each other about the current working groups in which scientists from the Netherlands participate.

New Zealand—The New Zealand SCOR Committee never meets in person, only working by email or teleconference.

Norway—The Norwegian SCOR Committee meets less than once annually in person, but more often by email.

Spain—In principle, the Spanish SCOR Committee meets at least once each year. They communicate by e-mail in between. This committee decided to concentrate its activity in organizing Working Groups of short duration (1-2 years) on questions of interest for the oceanographic community (e.g., data management, long time series).

Sweden—The Swedish SCOR Committee meets twice per year, in person.

Turkey—The Turkish SCOR Committee meets once per year if necessary to discuss and rank the working group proposals, otherwise communication is maintained by e-mails and phone contacts.

United Kingdom—The UK SCOR Committee meets once each year to discuss working group proposals. Sometimes that is done by email if the committee can't all get together. Other than that, the chair of the national committee occasionally sends emails to other members.

United States—The Ocean Studies Board meets two or three times each year. SCOR activities are discussed at most meetings. Once a year, the Ocean Studies Board has a special session on international activities, including a discussion of SCOR led by the SCOR Representatives.

Best Practices: Whatever the size of the national committee, it is advantageous for it to meet in person at least once annually, to conduct the work of the national committee (see next item). The committees may consult more frequently on an opportunistic basis and/or by phone or email.

Work of National Committees

Brazil—The most important duty of the Brazilian SCOR Committee is to express scientific comments about working group proposals and to invite scientific colleagues to take part in them.

Canada—The CNC/SCOR's most important duty is to provide an interface with international SCOR, both to disseminate information within Canada on ocean science programs and to act as a focal point for Canadian input to SCOR programs, such as the selection of working groups. CNC/SCOR has also provided leadership on national program initiatives, such as:

- publishing an electronic Canadian Ocean Science Newsletter
- provision of scholarship supplements for ocean science students in Canada
- selection and support for tour speakers on ocean science issues
- provision of a Web site for posting and archiving Canadian ocean science initiatives, such as historical ocean science photographs
- gathering and publishing information on PhD and MSc ocean science theses at Canadian universities
- provision of annual and *ad hoc* reports, electronically and in hard copy, on Canadian ocean science concerns and initiatives

China (Beijing)—The most important duty of the committee is to promote the exchange, cooperation and understanding of Chinese oceanographers with their international colleagues.

China (Taipei)—The major task of China (Taipei) SCOR Committee is to promote ocean science researches and applications and to communicate with SCOR.

Denmark—The committee organizes a national marine research conference every second year. The committee is also the national committee for IOC.

Finland—In addition to SCOR duties, the committee works through discussions concerning marine sciences in Finland, participation to marine research coordination work in Finland, and

public outreach through yearly seminars on various Baltic Sea concerning topics.

Germany—The *Senatskommission für Ozeanographie* advises the Senate of the DFG and the German research ministry ("Bundesministerium für Bildung und Forschung" (BMBF)) in matters of marine research and is particularly concerned with matters affecting the research vessels *Meteor* and *Maria S. Merian*. Its tasks include the ongoing coordination of the research vessel expeditions. It has the mandate of the Senate of the DFG to evaluate applications for ship time and to examine the final reports of the research trips. So it has numerous roles besides dealing with SCOR matters.

India— The Indian SCOR Committee does the following:

- Coordinates SCOR-ICSU activities in India
- Recommends (through the adhering organization INSA) its views regarding organizational changes of statutes, proposals for scientific action or matters for discussions
- Prepares country status reports
- Recommends scientists to represent India at the SCOR Committee meetings
- Recommends hosting of meetings and SCOR related activities and
- Recommends Indian scientists for Executive positions in ICSU/SCOR bodies

Japan—The main mission of JNC is to promote basic ocean sciences in Japan as a unique body of the Science Council of Japan. When necessary, JNC issues official proposals, reports, and records to raise important ocean-related issues publicly through the Science Council of Japan. JNC also promotes international cooperation in ocean sciences by contributing to the international SCOR. In this regard, reviewing the working group proposals is one of the main activities in the official meeting.

Korea—The most important task of the Korean SCOR Committee is to evaluate and rank working group proposals. In addition, the meeting hears progress reports from Korean members of SCOR working groups. Members responsible for SCOR large-scale projects report on the Korean activities. The meeting also discuss how to promote SCOR-activities nationally.

Netherlands—The Netherlands SCOR Committee aims to contribute to international SCOR by discussing and ranking the annual working group proposals (including participate in annual SCOR General Meeting), stimulate Dutch scientists to submit a working group proposal as well as to participate in larger scale SCOR-programs, and promote SCOR-activities nationally.

New Zealand—A significant number of NZ scientists have been involved in SCOR WGs and projects. There is a considerable contribution of volunteer time of NZ scientists into SCOR activities across WG and projects. This is well above the weight of the number of oceanographic scientists in the country.

Norway—The Norwegian SCOR Committee's main task is to contribute to development of SCOR and of international aspects of national ocean science.

Spain—In Spain, planning of oceanographic (and most other) research is guided by National Plans of Research prepared by the Administration (Comisión Interministerial de Ciencia y Tecnología, etc.) with help from ad hoc committees. These plans establish priorities and last for 4 years (the present Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica is for 2008-2011). The national committee of SCOR, as such, does not have any role in making these plans. During recent years, the Spanish SCOR Committee, together with other committees (SCAR, IGBP, IHDP, etc.) has been part of an organization called “Comité Español de Investigación en Cambio Global” (CeicAG, <http://turan.uc3m.es/uc3m/dpto/CPS/ceicag/>). This organization publishes a newsletter and used to convene at least a yearly meeting.

Sweden—The main role of the Swedish SCOR Committee is to communicate with SCOR and to promote geophysics and ocean sciences in the (Swedish) society.

Turkey—The Turkish SCOR committee promotes international cooperation between Turkish and international oceanographic communities through sending students abroad, organizing scientific exchanges and organizing summer schools and workshops.

United Kingdom—The main activity of the UK SCOR Committee currently is to review WG proposals annually.

United States—The Ocean Studies Board explores the science, policies, and infrastructure needed to understand, manage, and conserve coastal and marine environments and resources. In addition to exercising leadership within the ocean community, the Board undertakes studies at the request of federal agencies, Congress, or other sponsors, or upon its own initiative.

Best Practices: International SCOR depends on national SCOR committees to do the following: (1) nominate individuals in even-numbered years to serve as SCOR officers, (2) review working group proposals every year, (3) stimulate the submission of good working group proposals, (4) make SCOR activities visible within the nation, and (5) ensure that dues are paid annually to SCOR and to help raise other funding for SCOR activities. National committees may have other duties related to national ocean science communities and only devote part of their time to SCOR. In some nations, the role of the SCOR committee is limited by the existence of other national groups with overlapping roles.

Interaction with national oceanographic communities

Brazil—There are announcements through the Oceanography and Antarctic Coordination e-mail list and Science and Technology Ministry Web site (www.mct.gov.br/mar), but there are not really formal interactions with other groups. Nevertheless, there are personal interactions between some of the National Committee with their colleagues to promote SCOR.

Canada—Interaction with the Canadian ocean science community is normally accomplished through publication of its electronic Newsletter. The Newsletter is distributed, presently seven times per year, free of charge to some 450 subscribers. CNC/SCOR also maintains a Web site, www.cnscor.ca, and regularly publishes its Annual Report and other timely updates in the hard copy CMOS Bulletin and its Annual Review.

China (Beijing)—The members of China (Beijing) SCOR Committee are from various universities and research institutes. There is a good representation of ocean science community, which enables broad dissemination of SCOR information within the national ocean science community.

China (Taipei)—The China (Taipei) Committee reaches the national oceanographic community through the annual meeting of oceanographic scientists sponsored by the National Science Council (NSC) and from other NSC-supported group meetings.

Denmark—The Danish SCOR Committee reaches the national ocean science community through a biennial science conference.

Finland—The Finnish SCOR Committee reaches the national ocean science community through yearly seminars and a Web page (presently only in Finnish).

Germany—The "Senatskommission für Ozeanographie" maintains a Web site that serves as an important source of information; all successful cruise proposals are personally presented to the committee at its meetings by the PIs following the cruise.

India— The national oceanographic community in India is quite scattered and constituted by several universities and research centers of various governmental and semi-governmental bodies. The National SCOR Committee is planning to reach out to the oceanographic community in the country through the recently formed Ocean Society of India (OSI). An officer (usually the President) of the OSI is an invitee to the National SCOR Committee meeting.

Japan—All members of JNC for SCOR are very active in various ocean-related social as well as academic communities. They are also active in governmental as well as non-governmental activities. The international SCOR activities are regularly reported in the Newsletter of the Oceanographic Society of Japan to disseminate the information widely. We also note JNC for SCOR has several sub-committees linked with international programs such as GEOTRACES, SIMSEA and IIOE-2, through which close interactions with science communities are established.

Korea—The Korean SCOR Committee Chair reports on their plans and activities to the Korean Oceanographic Committee twice a year. Irregularly, they held sessions at the Korean Oceanographic Society meeting to promote SCOR-related activities. When a new SCOR working group is established and there is no Korean scientist is involved, the Korean SCOR Committee finds relevant Korean scientists and encourage them to participate as associate member. The Korean Oceanographic Committee provides travel fund.

Netherlands—In the near future, the Netherlands SCOR Committee would like to organise a national workshop or symposium together with the Netherlands Global Change Committee, which is also hosted by the Academy and which represents the programmes IGBP, WCRP, IHDP and Diversitas. The present chair, Corina Brussaard, and one of the former chairs, Hein de Baar, take the lead.

New Zealand—The New Zealand SCOR Committee interacts via the New Zealand Marine Science Society and uses its list server for the distribution of information.

Norway—The Norwegian SCOR Committee does not have a Web site or newsletter, but contributes to national marine science meetings.

Spain— The Spanish SCOR Committee has a Web page (<http://www.scor-es.org/>), among several others serving the national ocean science community (for example, the Red de Ciencias y tecnologías Marinas: <http://www.ciencias-marinas.uvigo.es/indexMar.html>). From time to time there are meetings, organized under various sponsors (e.g., GLOBEC of Spain, the series of Seminarios Ibéricos de Química Marina, etc.) that promote interactions at the national level.

Sweden—Interaction within the national scientific community is difficult. The Swedish SCOR Committee forwards information from international SCOR on relevant e-mail lists. The Swedish association for marine sciences arranges one conference per year, during which different topics are discussed.

Turkey—There is no regular, programmed facilities to promote interaction with national oceanographic communities. But Turkish SCOR Committee members participates national marine science meetings as much as possible.

United States— The Ocean Studies Board, serving as the U.S. National Committee for SCOR, interacts with all sectors of the oceanographic enterprise within the United States, including academia, federal and state governments, and the private sector.

Best practices: The visibility of SCOR within national oceanographic communities varies among the nations involved in SCOR, the efforts of national SCOR committees to inform national communities about SCOR activities, and the involvement of national scientists in SCOR working groups and other activities. A simple Web page could be helpful for every nation. All SCOR nations that have a Web page are linked to the SCOR Web site at <http://www.scor-int.org/nations.htm>.

Staffing of SCOR National Committees

Brazil—The Brazilian SCOR Committee has no staff.

Canada—CNC/SCOR does not have paid staff to carry out its activities. It relies on a volunteer Secretary to carry out the day-to-day activities of CNC/SCOR. The Secretary is provided a modest honorarium intended to ensure that any out-of-pocket expenses are looked after. The Canadian Meteorological and Oceanographic Society (CMOS) provides a Secretariat function for CNC/SCOR, including financial accounting, banking and other related support. CMOS maintains an annual MOU with the Department of Fisheries and Oceans to support activities of CNC/SCOR. DFO provides an annual budget to CNC/SCOR that supports travel, scholarships and secretariat services.

China (Beijing)—The China (Beijing) SCOR Committee has no full-time staff, but several

people devote part of their time to committee activities. The State Oceanic Administration provides some funds for the committee's annual meeting, Web site, and communication.

China (Taipei)—The China (Taipei) Committee has no full-time staff, but has a volunteer scientist employed by the Taiwan Ocean Research Institute (TORI) directed currently by the China (Taipei) Secretary General.

Denmark—The Danish SCOR Committee has no staff.

Finland—An expert secretary runs the operations of the Finnish SCOR Committee throughout the year. The secretary is employed by the Finnish Environment Institute (SYKE) and the SCOR work is part of the person's duties.

Germany—The Senatskommission has one full-time paid assistant who is at the scientist level (with doctorate). This person is paid by the DFG and is responsible for all Senatskommission business, including SCOR.

India—The SCOR National Committee in India is supported by the staff of the adhering body, the Indian National Science Academy, New Delhi.

Japan—JNC for SCOR has no staff but the official meetings are supported in general by the staff members of Science Council of Japan.

Korea—The Korean SCOR Committee has no staff but the Secretariat of the Korean Oceanographic Committee provides partial support. Also graduate students participate in the Korean SCOR meeting and do the note-taking.

Netherlands—The Academy provides for a (paid) executive secretary for the Netherlands SCOR Committee.

New Zealand—The New Zealand SCOR Committee has no staff.

Norway—The Norwegian SCOR Committee has no staff.

Spain—There is no paid or volunteer staff. The committee applies for funds through "Acciones Complementarias Internacionales" every 3 years. These funds allow paying help for Web pages, travel for meetings, etc.

Sweden—The Swedish SCOR Committee has no staff (paid or volunteer).

Turkey—The Turkey SCOR Committee has no staff.

United Kingdom—The UK SCOR Committee has a staff person of the Royal Society assigned to it, as part of the person's overall duties.

United States—The U.S. National Committee for SCOR is assigned a staff person from the National Academies of Sciences, Engineering, and Medicine who assists with SCOR activities as

part of their overall duties. A grant from the U.S. National Science Foundation covers part of the staff person's salary for duties associated with SCOR and also provides funding for travel to participate in the annual SCOR meeting, and other costs.

Best practices: Most national SCOR committees are comprised of individuals who are employed full-time in some other capacity and donate time to national committee activities. In such cases, it is very useful for the national committee to be assigned a staff person to assist the committee, to make sure that the committee is aware of deadlines from international SCOR and make sure that the duties of the national SCOR committees are fulfilled. Where this is done, the person's duties in relation to SCOR are usually a small part of their total duties. However, in most cases, national SCOR committees have no staff. It is recommended that SCOR committees with no staff recruit a volunteer to handle responsibilities, as the Canadian National Committee for SCOR does.

National Participation in Annual SCOR Meetings

Brazil—Until now, the Brazilian SCOR Committee had only one official participation in annual SCOR meetings. Dr. Ilana Wainer regularly participates, but was not officially sent as a Brazilian delegate. Budget and lack of staff are the constraints that determine this poor participation.

Canada—CNC/SCOR normally sends a representative to SCOR meetings, both its annual meetings and its executive committee meetings.

China (Beijing)—The Chair and Secretary General of the China (Beijing) SCOR Committee participate in the SCOR annual meeting regularly.

China (Taipei)—The China (Taipei) Committee usually sends a national SCOR member to participate in Annual SCOR Meeting.

Denmark—Danish scientists participate regularly in annual SCOR meetings.

Finland—The Finnish SCOR Committee participates every year.

Germany—Germany will always try to send its contingent of 3 representatives (who are elected by the Senatskommission from within and outside their rank) to annual SCOR meetings; DFG covers the costs of this. Personal scheduling problems may lead to not all 3 being able to attend all meetings, but normally all three should be there.

India—India has not participated regularly in the Annual SCOR meetings, but hosted the SCOR Executive Committee Meeting in 1999.

Japan—JNC for SCOR sends at least one member to every SCOR annual meeting. The travel is supported by Science Council of Japan. Other participants need to find their own travel budget. JNC is currently preparing the SCOR annual meeting to be held at Toyama in 2019.

Korea—Korea sends at least one member to every SCOR annual meeting. The Korean

Oceanographic Committee provides travel support.

Netherlands—The travel costs concerning the delegate's participation to the SCOR Meetings are not included in the budget and need to be requested separately every year.

New Zealand—The New Zealand SCOR Committee has had intermittent attendance at annual SCOR meetings, when they have not had a New Zealand person involved in the SCOR Executive Committee. The NZ committee has occasionally had some but not full funding from the NZ Royal Society for travel to SCOR Annual meetings. This is intermittent and getting harder to obtain. They try to send someone every two to three years, often associated with a working group proposal or activity involving NZ.

Norway—Timing conflicts and lack of dedicated travel support mean that Norway is not usually represented at annual SCOR meetings. They did host the annual meeting in 2007.

Spain—The Spanish SCOR Committee participates in SCOR annual meetings.

Sweden—The Royal Swedish Academy of Sciences usually pays for one member to go to the SCOR General meetings every second year. Members who want to attend the Executive Committee meetings in odd-numbered years have to fund their own travel.

Turkey—The Turkish SCOR Committee members tries to participate regularly in annual SCOR meetings, depending on their availability.

United States— The U.S. National Committee for SCOR sends one of the SCOR Representatives or a designee to the annual meeting (SCOR Executive Committee and General Meetings).

Best Practices: Some nations only fund representation at SCOR General Meetings, in even-numbered years. Yet, SCOR makes decisions related to new working groups, budgets, future dues, and other matters important for national SCOR committees at each annual meeting. The major difference between General Meetings and Executive Committee meetings is the election of officers at the former. The ideal situation would be to have at least one Nominated Member from every national committee at every annual SCOR meeting. This is the best way to ensure that national committees are involved in decision making by international SCOR.

Communication with national and international communities through newsletters and Web sites
Only five national SCOR committees currently maintain a Web site.

Korea—The Korean SCOR Committee does not have a web site of its own but plans to set up one in near future.

Best Practices: Every national SCOR committee should maintain a Web page, either on the Web site of their host or an independent page. This page should list the members of the national committee and how to contact them, and have links to the international SCOR Web site.

Liaison with National Committees for Other International Organizations

Brazil—There is no official liaison between the Brazilian SCOR Committee and other national committees, but there are official and no official participation of Brazilian administration and scientists in most of related international organizations.

Canada—The CNC/SCOR normally has liaison with other national committees for related international organizations through its membership, as well as through several *ex-officio* members.

China (Beijing)—There is seldom interaction between the China (Beijing) SCOR Committee and the national committees of other organizations.

China (Taipei)—The China (Taipei) Committee has informal linkage with national ISCU and IGBP committees.

Denmark—As mentioned above, the committee is also the national committee for IOC. Otherwise there are no liaisons.

Finland—The Finnish SCOR Committee does not have liaisons with other committees.

Germany—The "Senatskommission für Ozeanographie" also coordinates national tasks of the Intergovernmental Oceanographic Commission (IOC), the Marine Board of the European Science Foundation (ESF) and advise national and international oceanographic projects. The Senate Commission for Oceanography is thus coordinating and cross-sectoral activities for the scientific development of the German marine research. There are links to the following international programs and projects: Carboocean; CIESM; CLIVAR; ESF; Global Carbon Project; GOOS; ICES; IMBER; IGBP; IOC; IODP; Life, Earth and Environmental Standing Committee; LOICZ; PAGES; POGO; SOLAS; and WCRP.

India—The Indian SCOR Committee recognizes the importance of interacting with the INSA-ICSU National Committees for Antarctic Research (SCAR) and Joint IGBP-WCRP Committee.

Japan—Currently, JNC for SCOR has three sub-committees to liaise with international programs such as GEOTRACES, SIMSEA and IIOE-2. It has also informal links with national committees for various international organizations such as IUGG, IAPSO, and IOC with cross membership.

Korea—The Korean SCOR Committee Chair is a member of the Korean Oceanographic Committee which has subcommittees for IOC and PICES. At the Korean Oceanographic Committee, they exchange information and make coordination for the international activities when necessary.

New Zealand—The New Zealand SCOR Committee has links with the NZ IGBP committee, with cross membership.

Norway—The Norwegian SCOR Committee has informal links with IOC and IAPSO (IAPSO

and the National Geophysical Society and the national committee for IUGG are well linked together), but none with IGBP or others.

Spain—The Spanish SCOR Committee has linkages through the Spanish ICSU committee and the Comité Español de Investigación en Cambio Global (CeICAG).

Sweden—The Swedish SCOR Committee includes the IUGG associations, for example, IAPSO.

Turkey—The Turkish SCOR Committee does not have liaisons with other committees.

United States—The Ocean Studies Board has occasional interactions with the national committees of ICSU and other entities. In addition, the Ocean Studies Board provides a representative to the U.S. National Committee for the Intergovernmental Oceanographic Commission.

Best practice: Serving multiple roles (beyond SCOR) can make it possible to link SCOR with other international organizations. There is a natural reluctance for joint action among national committees for different organizations, for a variety of reasons, but such interactions could be beneficial to both the national committees and their international organizations.