



## 2020 Report on SCOR Visiting Scholar Program

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## SCOR Visiting Scholar Program 2020 Report

The SCOR Visiting Scholar program was started in 2009, to send scientists to developing countries to provide mentoring and teaching using a cost-effective approach. The program was loosely based on similar programs of the Partnership for Observation of the Global Ocean (POGO). SCOR issues a call for applications in September/October of each year and the SCOR Committee on Capacity Building selects applicants each year to serve as Visiting Scholars, depending on funds available. In recent years, SCOR has been able to support six Visiting Scholars: three supported with funds from the U.S. National Science Foundation, two with funds from national SCOR committees, and one with funds from crowdfunding and from the budget of the SCOR Committee on Capacity Building (which also comes from national SCOR committees).

Approved Visiting Scholars receive up to US\$2,500 for airfare and local food expenses during their time in the host country. The host institution is expected to provide lodging as their contribution to the visit. Visiting Scholars must spend at least two weeks in the host country and some have stayed as long as two months.

Six Visiting Scholars were appointed for 2020, but were not able to complete their assignments before the COVID-19 pandemic emerged. SCOR will hold their funding for 2021 and also will approve a new set of Visiting Scholars for 2021.

### Geographic Spread of Scholars and Hosts

From 2009 through 2020, SCOR has approved 45 Visiting Scholars from 18 countries; 9 of the Visiting Scholars were developing country scientists serving in other developing countries (Figure 1). These figures include 2020 Visiting Scholars who were approved, but whose travel has been postponed due to the COVID-19 pandemic.

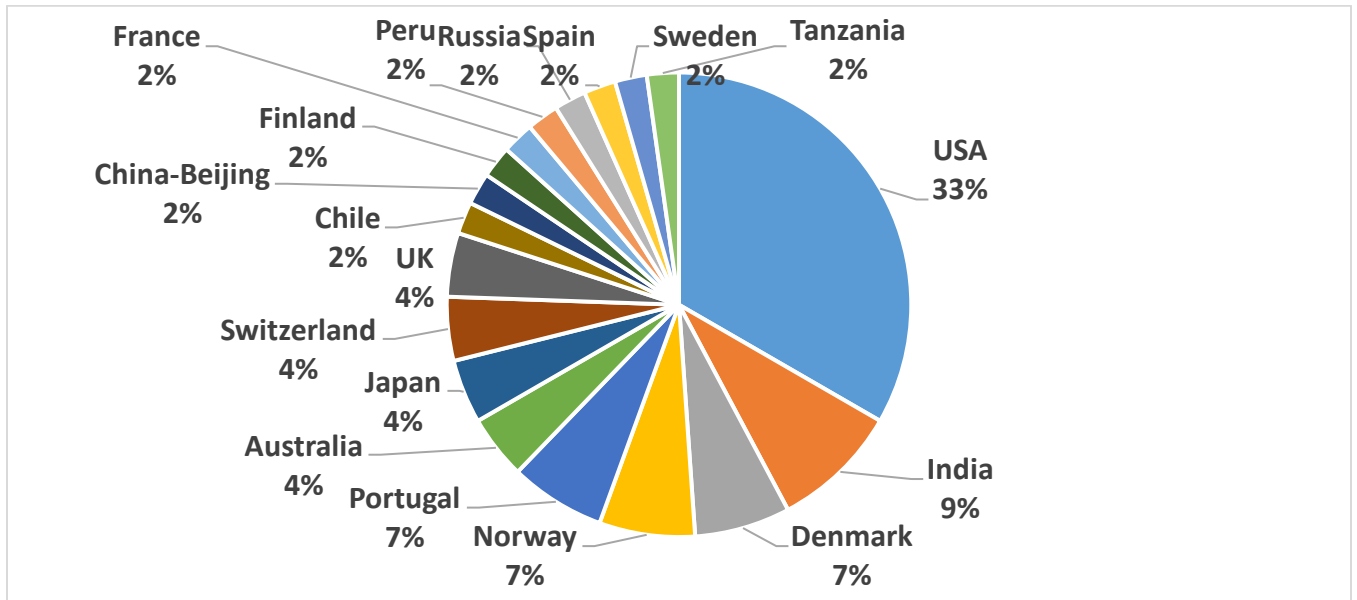


Figure 1. Source country of SCOR Visiting Scholars (2009-2020)

From 2009-2020, Visiting Scholars have served in 23 different countries (Figure 2). Comparing the countries of residence of SCOR Visiting Scholars and their host countries illustrates that some countries have been both senders and hosts (Peru and India), indicating that some developing countries have enough expertise on some topics to send scientists to other developing countries, but may lack expertise on other topics.

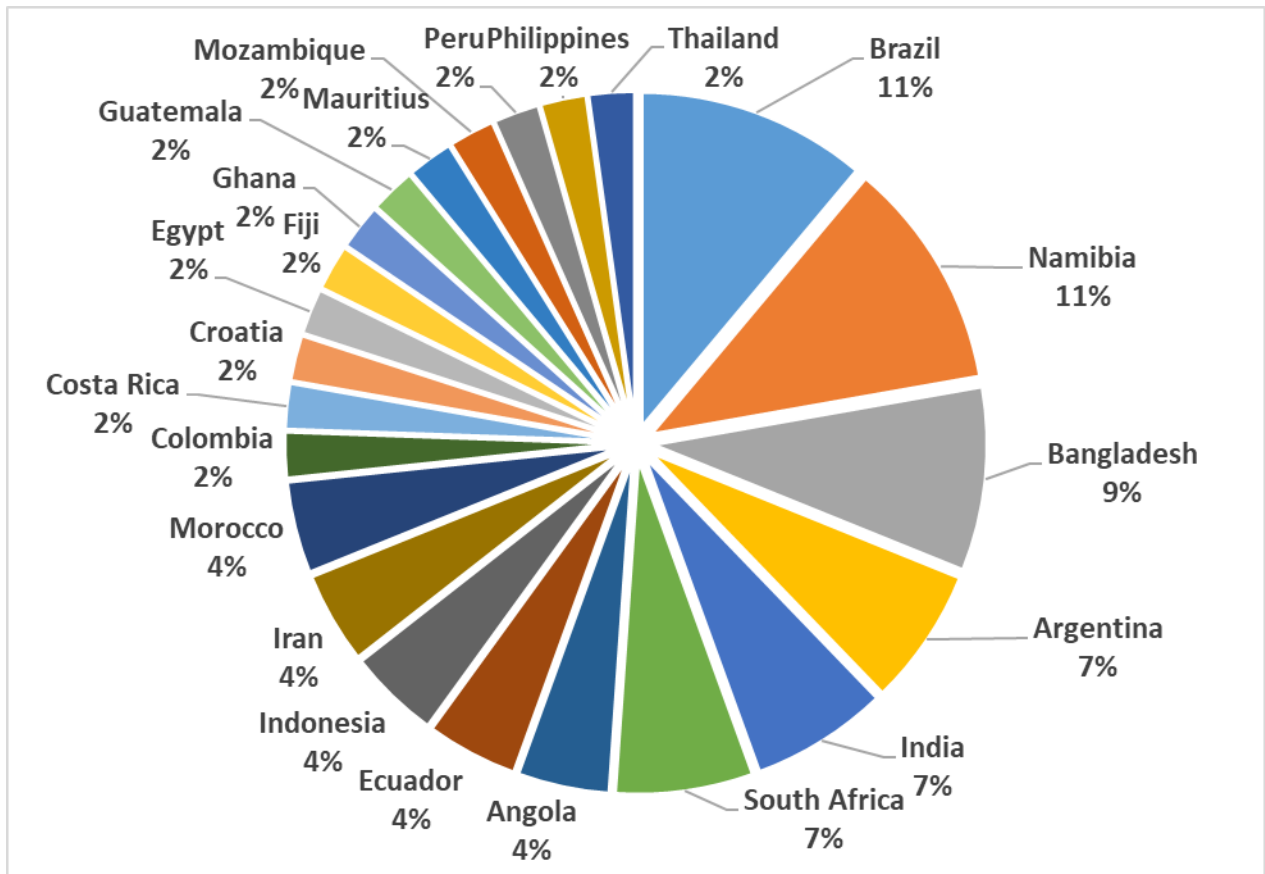


Figure 2. Host country of SCOR Visiting Scholars (2009-2020)

### Demographics of Visiting Scholars

*Age*—It was originally thought that the program would mostly attract retired professors, but retired professors account for only 12.5% of the total Scholars. This is notable because the original conception of the program was that it would primarily be aimed at retired scientists because they would have more time to devote, but it became apparent quickly that a high percentage of applications come from non-retired people who can spare time in their schedules to serve as SCOR Visiting Scholars. Most SCOR Visiting Scholars have been mid-career scientists, although one was a Ph.D. student and another was a post-doctoral fellow. The age distribution is given by gender in Figure 3.

*Gender*—Figure 3 demonstrates that the age distribution of Visiting Scholars differs by gender. The most common age range for male Visiting Scholars is 60-69 years, whereas the most common age range for female Visiting Scholars is 40-49 years. The reason for this difference has not been explored, although it may primarily reflect the demographics of the global ocean science community.

Figure 3 also shows that the number of female Visiting Scholars is much lower than their male counterparts; 35% of Visiting Scholars from 2009-2020 were female. An analysis of the gender of applicants shows that 32% of applications have been from females, so the lower percentage of females than males as approved Scholars is not due to any bias in the approval process.

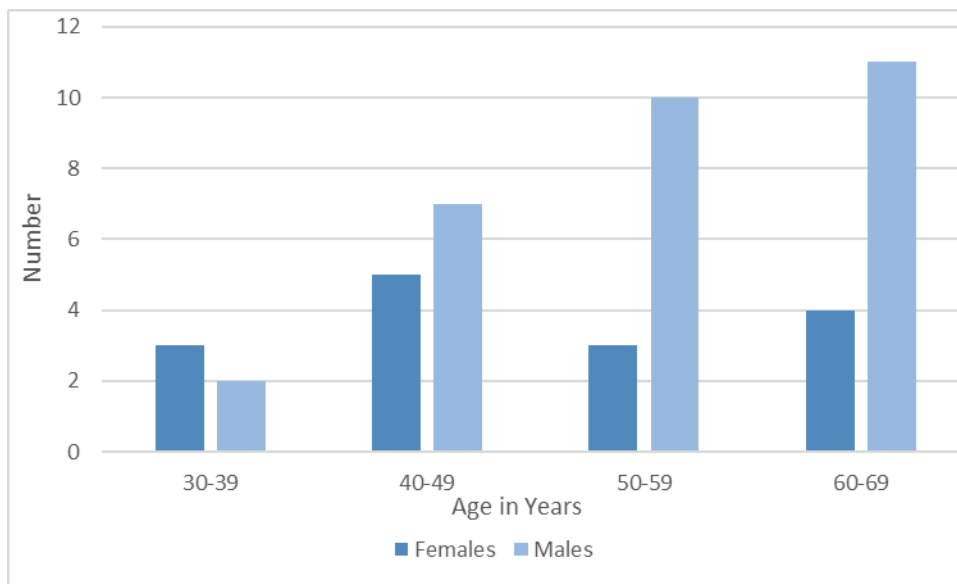


Figure 3. Age distribution of SCOR Visiting Scholars by gender (2009-2020)

#### Results of Survey of Visiting Scholars who served from 2009 to 2019

A SurveyMonkey questionnaire was sent to the 30 SCOR Visiting Scholars who served from 2009 to 2019; responses were received from 24 of them, an 80% response rate. (This does not include the 2020 Visiting Scholars.) The survey data are given in Appendix I. Scholars are also requested to provide reports after their visits, but not all Scholars comply; reports have been received from 20 Scholars.

**Current Position of Scholars**—The survey allowed multiple answers to this question, so the total percentage is greater than 100%. 83% of the respondents classified themselves as researchers, 25% as teachers, and 25% as Full Professor, Adjunct Faculty Member, Chief Scientist, Researcher and Teacher, Wildlife Ecologist, and Research Scientist Emeritus.

**Influence of SCOR Visiting Scholars**—SCOR Visiting Scholars were asked to indicate a range of trainees they have been involved with at the host institution:

- 3 answered 1-5 trainees
- 3 answered 6-10 trainees
- 8 answered 11-20 trainees
- 10 answered >20 trainees

Using this information, it was calculated that the 24 SCOR Visiting Scholars who answered the survey interacted with approximately 309-405 individual students and other trainees. (The range was calculated from the lowest and highest number in each class size category.) If the number of trainees of the other 21 Scholars who didn't answer the survey were similar to those who did answer the survey, the total number of trainees for the 45 Scholars is probably at least 580 individuals.

**Contact with Trainees after the SCOR Visiting Scholar assignment**—96% of the SCOR Visiting Scholars kept in touch with one or more trainees after their service in the host countries. Of those who have kept in contact with trainees, 38% did so once per year or less, 29% had contact once every 2 to 3 months, and 33% had contact monthly. The purposes of the continued contact includes the following:

- To continue research collaboration: 75%
- To provide continuing mentoring: 62%
- To provide reference letters or help with applications/proposals: 38%
- To plan a research visit or exchange: 38%
- Other (please specify): 25%

The other purposes include discussions of potential PhD work in the Scholar's institution, to prepare proposals on joint research and dissemination activities, to provide opportunities for field experience and career development, and to motivate trainees to attend international courses in various fields.

**Benefits to SCOR Visiting Scholars from their experiences**—SCOR Visiting Scholars were asked to rank the relevance of a variety of statements about the benefits they gained from serving as a Visiting Scholar. The most common benefits cited were that the training provided personal satisfaction or enjoyment, the training broadened the Visiting Scholars' cultural horizons, and the training led to continued research collaborations. The least important benefits were satisfying a requirement of the Scholar's employment contract or grant, or development of a publication or presentation for a meeting.

**Support from SCOR and Local Hosts**—Most of the Visiting Scholars felt that the US\$2,500 awarded to each Scholar was adequate in terms of financial support and that the SCOR Secretariat provided adequate logistical support. SCOR support is used primarily for airfares and local subsistence, whereas the local hosts are required to provide lodging. (Some local hosts provided housing in their personal residences.) 100% of the respondents recommended sending another SCOR Visiting Scholar to the same host institution, indicating basic satisfaction with the arrangements.

#### Results of Survey of Visiting Scholar Hosts for 2009 to 2019

A SurveyMonkey questionnaire was sent to 27 institutions that had hosted SCOR Visiting Scholars in 2009-2019. See Appendix II for detailed results. So far, 11 hosts responded to the questionnaire (41%).

Hosts learned about the Visiting Scholars program through colleagues, the *SCOR Newsletter*, from other SCOR activities, and through other international collaborations. Most of the hosts knew about SCOR before applying to host a Visiting Scholar, but one host became acquainted with SCOR through the application process. The hosts who had previously known about SCOR were aware of SCOR working groups, research projects, and capacity-building activities. All the hosts who responded have kept in touch with the SCOR Visiting Scholars after they served, at frequencies from monthly to annually. The continuing contact was to receive continuing mentoring, to continue research collaboration, and to plan a research visit or exchange. The hosts

indicated that not only students, but also faculty at the host institutions benefitted from the SCOR Visiting Scholar visits. The host institutions were unanimous in their willingness to host another SCOR Visiting Scholar. Benefits of the Visiting Scholar visits included the following:

- The training provided connections with scientists in other countries who enabled the host institute to participate in international or regional projects or networks.
- The training enabled the host institute to implement and teach a new module/class as part of a higher education program.
- The training broadened the scope of oceanographic research conducted by the host institute.
- The training enabled the host institute to learn new research and/or observation techniques.

Of the host institutions that answered, they had also benefited from training activities provided by the International Oceanographic Data and Information Exchange (IODE), the International Atomic Energy Agency (IAEA), and POGO.

Hosts suggested the following for improving the effectiveness of the Visiting Scholars program:

- In parallel with individual contacts, the announcement should be spread through official channels (universities and research institutes) to reach a large number of scientists and increase the program visibility.
- Organize a yearly summer school with lectures from well-known professors. That can be hosted in different developing countries each year, with a theme on oceanographic research.
- Increase the number of Visiting Scholars.
- Help to cover accommodation expenses.
- Organize the visit to include not only capacity building, but also research, at least preliminary studies in collaboration.
- Create a follow-up program for the collaboration and maybe allocate resources for a second visit.
- Advertise more widely.

#### Results of Survey of Trainees

SCOR distributed a survey to trainees for the 2018 and 2019 Visiting Scholars, soon after the courses; no results are available for the earliest years of the program. The survey was distributed through the Visiting Scholars. The survey was translated into French for use for a Visiting Scholar who taught in Morocco. The results of the survey are given in Appendix III.

SCOR's survey to trainees is aimed at evaluating the satisfaction of the trainees with their training and the benefits they thought they gained from the training, soon after the training occurred. For training by SCOR Visiting Scholars, most of the trainees (74%) thought the courses were the right duration and the right level of difficulty (77%), although some trainees would have liked a longer and/or less difficult training (the length of courses is determined by the Visiting Scholar and host.) A majority (95%) of trainees expressed that their expectations were met, that the Visiting Scholars knew their subject matter well, were enthusiastic, and were

easy to understand. The trainees expressed that the major benefits from the training were gaining new information for research, learning new research techniques, and networking with the Visiting Scholar. Trainees reported that they would pass on the knowledge gained to their colleagues and students through presentations and articles. Examining data from the trainees indicates that the system for selecting Visiting Scholars is working properly, in that understandable, knowledgeable, and enthusiastic Visiting Scholars have been selected. Areas for improvement could be to make the training events longer, perhaps with a more basic level of training for those who need it, followed by a more advanced level for all trainees. Training in the language of the host country was helpful, when this was possible.

#### Achievements of SCOR Visiting Scholars

An important outcome of SCOR Visiting Scholarships are the continuing relationships that develop between some of the Visiting Scholars and the institutions in which they taught and mentored. The following are some examples of the relationship building aspects of the Visiting Scholar program.

**Development of University of Namibia's Henties Bay Campus as a national center for ocean science with potential to attract international scientists**—Kurt Hanselmann, a microbial geocologist from ETH Zurich (Switzerland) was first sent by SCOR to the University of Namibia in 2010, in response to an application of the University of Namibia to host a Visiting Scholar. The University of Namibia asked for someone to teach biological and chemical oceanography. SCOR matched the needs of the University of Namibia with expertise on its Scholars list and found Hanselmann's experience fit the request. During his engagement as a SCOR Visiting Scholar in 2010, Hanselmann recognized the potential of developing an academic program in oceanography at the University of Namibia. Hanselmann applied to serve again in 2011 and was sent back to the University of Namibia. As an outcome of these assignments he later gathered used laboratory equipment in Europe and had it sent to the University of Namibia on German research vessels to help equip the laboratories at Henties Bay. Hanselmann was awarded a grant from the Agouron Institute and got support from his home institution to create a Regional Graduate Network for Oceanography (RGNO). Together with instructors from Namibia and South Africa, and with colleagues from universities worldwide, Hanselmann was able to initiate annual Ocean Research Discovery Camps at the University of Namibia's Coastal and Ocean Research Center (SANUMARC) in Henties Bay. The RGNO courses are offered internationally and close to 50 research students and instructors from 16 different countries have participated in the courses so far. From the onset, the partnership also included the National Marine Information and Research Center (NatMIRC) of Namibia's Ministry for Fisheries and Marine Resources, which contributes to the RGNO by offering a few days of experience on its research vessel *Mirabilis*. Six Research Discovery Camps have been held so far, now also funded by the Simons Foundation.

**Boosting skills in physical oceanography at the University of Cape Town (South Africa) in support of observations of the Agulhas Current**—Boosting skills in physical oceanography in South Africa in support of sustained observations of the Agulhas Current as part of the Global Ocean Observing System, Lisa Beal, a professor from the University of Miami, served as a Visiting Scholar at the University of Cape Town (UCT) in 2013. Beal's visit to UCT built on previous capacity-building activities in southern Africa as an activity of a SCOR working group



that reviewed the role of the Agulhas Current in global climate and past climate change ([WG 136](#)). In turn, Beal's Visiting Scholarship has led to an ongoing teaching and mentoring relationship with UCT students, in which Beal returned to teach in 2016 and 2018.

**Increasing abilities at the Namibian National Marine Institute and Research Centre (NatMIRC) to identify the specific algae causing local harmful algal blooms**—Jacob Larsen, an associate professor and trainer at the University of Copenhagen, has served twice as a SCOR Visiting Scholar at NatMIRC to help train national agency staff on identification of harmful algal bloom organisms. Larsen also conducted training at the University of Namibia during his visits to Namibia, which helped strengthen the relationship between the agency and the university. The HAB course participants qualified for the IOC “Certificate of Proficiency in Identification of Harmful Marine Microalgae” if they passed a 3-hour practical examination in species identification at the end of the course. This course has been organized annually since 2006 at the IOC Centre in Copenhagen, but the Namibia course was the first time given away from the IOC Centre. (Larsen also served as a Visiting Scholar in Ghana.)

**Increased cooperation between the Indian National Institute of Oceanography (NIO) and the University of Dhaka**—SCOR has sent three NIO scientists (Prasanna Kumar, Nagappa Ramaiah, and Baban Ingole) as Visiting Scholars to the University of Dhaka for at least one month each to teach graduate students in Bangladesh. NIO has complemented these visits by hosting Bangladeshi students at NIO for studies there.

**Cooperation between Sweden and Costa Rica on ocean acidification research**—Visiting Scholar Sam Dupont served in Costa Rica in 2017. He met with his host times several times after the visit, including training in Sweden. The host has continued to develop some ideas, had a project funded in Costa Rica (for a Central American network, in which Dupont is playing a consulting role) and both the host and Dupont are part of a large-scale international project. This is a long-term collaboration.

#### Lessons Learned

The lessons learned included the following:

- The amount of funded provided to Scholars (US\$2500) is adequate for airfares and some local expenses.
- The requirement for hosts to provide lodging is not a barrier to host institutions in most cases, although at least one host complained about the requirement. Another potential host suggested that they would need to have any Visiting Scholar stay in a private home. Not all institutions have housing available for visiting scientists and must resort to hotels or stays with the local host. Some Scholars need to pay for local costs (particularly food costs) from other sources because the hosts did not provide for these costs.
- The availability of a Visiting Scholar can provide an opportunity to provide special training to local students in areas not covered by faculty at the host institution.
- Some institutions request that Scholars teach in English, whereas others request that the courses be taught in the national language.
- Not all matches work out. One individual approved as a Scholar never made their visit because they could not work out arrangements with potential local host. Another

approved Scholar did not undertake their visit because of family problems and another got sick early in the visit and had to return home. Having insurance is key.

- Not all hosts are equally responsive and helpful in preparing before the visit. This can be stressful, particularly for Scholars from developed countries who have not pre-matched themselves with host institutions, but are relying on contacts provided by SCOR.

#### Ideas from Visiting Scholars

See Appendix I

In summary, the SCOR Visiting Scholars program has been effective at getting mostly non-retired scientists to teach and mentor students in developing countries in Africa, Asia, and South America. About 500 students have benefited from the program since 2009. The support provided by SCOR (\$2500 per Visiting Scholar) and from host institutions generally is adequate.

## Appendix I Survey to SCOR Visiting Scholars

### Current Position

	Responses	
Researcher	83.33%	20
Teacher	25.00%	6
Manager	0.00%	0
Retired	12.50%	3
Other (see below)	25.00%	6
	<b>Answered</b>	<b>24</b>
	<b>Skipped</b>	<b>0</b>

**Other:** (1) Full Professor, (2) Adjunct Faculty Member, (3) Chief Scientist & Head Physical Oceanography Division; Professor, (4) Researcher and Teacher, (5) Wildlife Ecologist, and (6) Research Scientist Emeritus

### How did you learn about the existence of the SCOR Visiting Scholar program?

SCOR email, newsletter, and/or Website: 12

Host institution: 5

Word of mouth: 5

SCOR Secretariat: 2

### Did you know about SCOR before you heard about the SCOR Visiting Scholar program?

Yes: 15

No: 5

Comments: (1) Knew of it but did not know much about it, (2) I had heard about SCOR, but not the Visiting Scholar program, (3) Since about 1980, and (4) It is a very important activity of SCOR.

### Which SCOR activity or activities were you aware of?

SCOR working groups: 9

SCOR-supported research projects: 8

SCOR capacity-building activities: 7

Conferences sponsored by SCOR: 3

Publications from SCOR activities: 1

### Have you kept in touch with any of the trainees from your SCOR Visiting Scholar service?

Yes: 22

No: 1

Comments:

- Yes, I have been in touch with some of the trainees from the host institutes.
- Collaboration project and mentoring
- N/A, unless you mean host institution staff, then yes

- Several Students whom I taught 2 credit course in Physical Oceanography visited NIO for periods ranging from few weeks to 3 months for training
- With students by email and with the colleagues in Argentina we continue to work together in some projects
- I have made more visits to help promote their marine research
- I have been in regular contact on advice regarding culture methods of microalgae
- \_\_\_\_\_ is a black South African woman who was very quiet during my course but got an A. Subsequently we kept in touch and I got her a place on a scientific cruise around South Africa aboard *Meteor*.
- Intend to maintain contact to carry the project to completion
- They are very very happy that I could teach to them. Thanks to SCOR
- hoping to continue collaborative research
- some of them serve now as technical assistants to the course

How often do you have contact with previous trainees?

once per year or less: 9

At least once per month: 8

once every 2-3 months: 7

Have you kept in contact with previous trainees for any of the following reasons?

To continue research collaboration: 18

To provide continuing mentoring: 15

To provide reference letters or help with applications/proposals: 9

To plan a research visit or exchange: 9

Other (please specify): 6

- Too soon to determine if there will be future contact with trainees; contact mainly with host
- Discussions re PhD candidature in Australia
- To prepare proposals on joint research and dissemination activities
- My communication has been quite limited due to U.S. sanctions [on Iran]
- To provide opportunities for field experience and career development
- motivate to attend international courses in various fields

Please indicate the approximate number of students who benefited from the training and/or supervision you provided.

- 1-5 trainees: 3
- 6-10 trainees: 3
- 11-20 trainees: 8
- >20 trainees: 10

How have you benefited from providing the training?

1 = low relevance or accuracy of statement 5 = high relevance or accuracy of statement

	1	2	3	4	5
The training improved my teaching skills.	8.7%	8.7%	43.5%	26.1%	13.0%
The training was a good addition to my CV.	17.4%	26.1%	30.4%	21.7%	4.4%
The training satisfied a requirement of my employment contract or grant.	60.9%	8.7%	13.0%	4.4%	13.0%
The training provided personal satisfaction or enjoyment.	0.0%	0.0%	0.0%	20.8%	79.2%
The training provided an opportunity for me to visit a different country or institution.	4.2%	16.7%	12.5%	25.0%	41.7%
The training broadened my cultural horizons.	4.0%	4.2%	12.5%	45.8%	33.3%
The training helped to advance one or more of my research projects.	8.7%	17.4%	30.4%	26.1%	17.4%
The training resulted in one or more research publications.	39.1%	17.4%	26.1%	8.7%	8.7%
The training led to an oral or poster presentation at one or more conferences	47.8%	21.7%	8.7%	8.7%	13.0%
The training led to continued research collaborations.	4.4%	8.7%	17.4%	34.8%	34.8%
The training led to another visit or exchange of a student or instructor.	17.4%	0.0%	34.8%	34.8%	13.0%

Was the financial support from SCOR adequate?

Yes: 16

No: 0

Comments:

- It was only possible because I topped up the expenses since my host institution didn't have the means
- I am yet to claim financial support except the cost of the air ticket.
- I was on sabbatical and had part of my expenses (travel) already covered. The SCOR grant was a very good complement to cover food and, importantly, lodging, which it is a bit expensive in a safe area in Durban.
- It was basically subsistence
- It was generous
- Living expenses were provided by UCT
- No, but the host covered most of the difference
- outreach or training has become a necessity for global researchers who need access to particular study systems. In their grants they must include finances for training, nowadays.

Was the logistical support from SCOR adequate?

Yes: 17

No: 1

Comments:

- did not get logistical support, I was invited by my colleagues
- I did not require logistical support. But, the application and disbursement processes were very good and simple, and that is very positive.
- Local logistical support was very important
- Logistics were handled between myself and faculty at UCT
- In fact, EXCELLENT. Thanks in particular to DR Ed Urban
- Not sure what is meant

Was the support from your local host adequate (e.g., lodging, food, necessities for teaching, transportation)?

Yes: 22

No: 0

Comments:

- in part; I had to cover my lodging because their facilities were not operational
- Accommodation, transportation was adequate. Teaching facilities had to be adapted to minimal standards, e.g. without internet access

Would you recommend sending another SCOR Visiting Scholar to the same institution?

Yes: 21

No: 0

Comments:

- Students and young researchers would be benefited from such visit by another visiting scholar. I wouldn't be able to recommend anyone in specific right now.
- It is still developing additional participants may be too complex to manage
- Yes, provided the host institution is aware of the value of the program and interested in developing it themselves further. No single visits without becoming part of a strong and institution overarching activity.

Were trainees and staff aware of SCOR activities at the time of your visit?

Yes: 13

No: 6

Comments:

- Just a few of them were aware of SCOR activities.
- I am not sure about this, but every presentation I gave was prefaced with a description of SCOR
- Staff who requested for a Physical Oceanographer for teaching & Mentoring student was aware of SCOR activities
- students were not but faculty at UCT were aware of SCOR through SCOR WG 136
- I was the third or fourth Visiting Fellow

Based on your experience as a SCOR Visiting Scholar, what can SCOR do to increase its visibility and activity at the host institution and in the host country?

Comments:

- Better promotion by direct sending promotional materials to the institution
- The host institutions should be encouraged by the SCOR to organize the workshop(s) dealing with specific themes addressing the need of the trainees, involving the visiting scholars from other countries.
- Include my host in future SCOR announcements so that they can follow up with possible funding opportunities to provide capacity building workshops with other researchers willing to train that have expertise different from mine. Perhaps (through a competitive application to those who show leadership or academic initiative) support a visit from a workshop attendee to my institution or another institution that has a willing host to provide follow up individual training.
- It was the host institution that pushed me to apply so I guess it is quite visible there
- Not sure, since Iran is a difficult country in which to operate
- Possibly it would be helpful to promote regional committees on specific themes, for example "Physical oceanography of the Caribbean". Another option would be to identify Marine institutions in each country and to promote synergies and alliances. It is my experience that countries with relatively little tradition in marine sciences have their researchers rather disconnected among themselves.
- SCOR should try to make more publicity on the SCOR's actions (which are great for basic science!)
- I cannot speak for the whole South Africa. But, SCOR seems to be well recognized as an important partner at ORI, Durban. They have a strong and friendly connection with Ed Urban, and they seem to look forward to engage in the coming Indian ocean program.
- Conducting workshops & supporting students to come to institutes like NIO for short period of time
- by publishing the report that include the host institution, with the social networks, and in the SCOR page a link with all the host institutions and the host country in order the people know more and can choose this institution as a possibility for training and research
- To not give up, to keep the perseverance and spread the initiative particularly among the countries/institutions that can benefit from the program. I notice that the program is known in the countries that can provide instructors but not in the countries that can benefit from it
- I want it to be a sponsor of an ECSA Conference in Thailand and use this opportunity to promote its activities. Unfortunately, Thailand descended into political chaos and we had to abandon the ECSA conference. But it is still on the cards and ECSA still is looking into the possibilities later.
- Researchers scholars should be able to provide with more information about SCOR to all hosting institutions. Maybe an introduction about it.
- Encourage more SCOR scholars. Especially people of diversity
- Not sure.
- increase the number of SCOR visiting scholars and increase awareness

- The hosts have to take proactive steps in giving wide publicity offered by the SCOR. I was happy that I met up with the Vice Chancellor, Many Deans in the University and also from other couple of universities. This was possible by the coordination of my host Prof Kawser Ahmed.
- this survey is a good step, should go to the host as well
- I think SCOR sabbatical fellowships or SCOR chairs (annual) would be very useful
- Visibility comes through exceptional programs. Activity: Create courses that no single institution can offer, use the national, regional capacity and the local infrastructure in such a way that the host institution will be in a position to continue with its own resources. Work towards high international recognition. Help directing towards real research questions and publications or other means that make the work visible.

How can the SCOR Visiting Scholars program be improved in the future?

- In my opinion the programme is excellent but of course travelling to and reasonable accommodation in some developing countries can be very expensive and if possible, this should be accounted for in the funding available
- Instead of just one visit by a SCOR Visiting Scholar, there should be some kind of framework for the follow-up visits by the same scholar, so that the objective of the program would be achieved more meaningfully.
- continue to fund lectures and workshop initiatives
- I am very happy with the whole process
- Not necessary; it was excellent
- Establishing networks between visiting and local researchers, either by topic (e.g. physical oceanography) or geographical location (e.g., Latin America).
- I don't know, my experience was great...because of my guest organization. However, attendees were from Rio do Sul or Sao Paulo (far, expansive..) Perhaps SCOR could help people from remote universities to attend, with some travel support?
- I believe that SCOR may have an important facilitator role when host and guest are not well acquainted, or represent different cultures. In my case, the situation was very simple: I knew well most people in the institution, a small institution. In a matter of days I was perfectly integrated in their work and social life, and there was no need for facilitation from outside. On the other hand, if SCOR wanted that the visit and research matched more closely some future plans of SCOR, it should have been made more clear.
- Making more number of such visiting Scholarships so that many more people who are genuinely interested to teach/mentor/impart knowledge. Encourage students for short visits for training/internship
- Could be important maintain a link and for example be part of a network the visitors and the institutions that receive news and opportunities by email for example.
- The program is quite good... To be honest I do not know. May be by better identifying the countries/institutions that can benefit from the program. I noticed that most of the countries/institutions that would benefit from the program are not motivated to apply. Most of the times because of installed procedures and associated bureaucracy. I know quite well the case of Angola where I did teach and where I did encourage the SCOR program, but without success due to the lack of effectiveness or motivation.



- It needs to be more broadly advertised. The programme needs to be upgraded so it has the cache of a travel grant from the Royal society or the Churchill Trust.
- I have no suggestions
- it seems to work fine, a few grants may be made available for longer stays
- not sure
- I was quite satisfied with the program.
- by preparing specific programs with specific goals to all scholars
- By building a database of the Visiting Fellows to make use of their expertise in any other needy country. This is because many scholars may not even opt for going out to some countries to offer training. The program to succeed and grow in future often times the retired resource persons may serve well. I also think that by collecting the Lecture notes and placing them on the SCOR website would help showcase SCOR support under Visiting Scholars Program.
- a larger financial grant would help
- Foster mentoring partnerships between early career researchers and seniors
- Follow the unique idea of the RGNO. It was created 2 decade ago; its an excellent idea, but most institutions still do not work together on training. Get funding for the RGNO idea and establish them worldwide with people who dedicate their knowledge, efforts and time. Analyse the ECODIM model (Chile) and copy the good things. ECODIM was just awarded an educational prize (only honour and unfortunately no money associated with the prize that would allow to try out new things). But also look at the development of the departments and the fields in oceanography that grew out of ECODIM's international network: The Millennium Institute partnership. Promote grant giving foundations to support researchers who dedicate time to link their research with training in the regions (e.g. The Simon's Foundation awarded a 500 k research grant based on the access to the Benguela to one of our RGNO instructor. Help building up research infrastructure. Attract (northern, developed) Universities to offer courses for their students as semesters abroad and make their professors work together with the local lecturers, provided they want to and are attracted by doing research with their students.

Appendix II  
Survey of SCOR Visiting Scholar Hosts

A SurveyMonkey questionnaire is distributed to hosts of SCOR Visiting Scholars. To date, 11 hosts have responded, of 27 hosts so far.

How did you learn about the existence of the SCOR Visiting Scholar program?

- Not quite sure (was long time ago), but very likely through the OA-ICC mailing list
- From the scholar
- SCOR Newsletter, Announcement of the Visiting Scholar Scheme, and perhaps IOC
- Web page
- I learned about the program through colleague
- SCOR Newsletter
- Advertisement from a newsletter
- As part of my SCOR involvement
- Through existing international collaborations

Did you know about SCOR before you hosted a SCOR Visiting Scholar?

Yes: 7

No: 3

Which SCOR activity or activities were you aware of?

- SCOR Research Projects: 6
- SCOR Capacity-Building Activities: 6
- SCOR Working Groups: 5

Have you kept in touch with the SCOR Visiting Scholar?

Yes: 11

No: 0

How often do you have contact with the SCOR Visiting Scholar?

- at least once per month: 6
- once every 2-3 months: 3
- once per year or less: 2

Have you kept in contact with the SCOR Visiting Scholar for any of the following reasons?

- To provide continuing mentoring: 11
- To continue research collaboration: 11
- To plan a research visit or exchange: 7
- To provide reference letters or help with applications/proposals: 3

Please indicate the approximate number of students who benefited from the training and/or provided by the SCOR Visiting Scholar.

- 1-5 trainees: 1
- 6-10 trainees: 1
- 11-20 trainees: 3
- >20 trainees: 5

Please indicate the number of faculty and staff who benefited from the training.

- 1-5 trainees: 6
- 6-10 trainees: 2
- Other:
  - About 1-5 researchers during training. Additionally >45 people (researchers, teachers, students, NGO members) attended his public lecture at the University. He also had the chance to discuss ideas for collaboration projects with staff from a Marine station during one of the field trips.
  - From the training 1-5, but >45 attended the public lecture

Was the financial support from SCOR adequate?

Yes: 6

Comment:

- pretty sure maybe the value is too small
- Not adequate but iwas somehow OK
- Only return air ticket
- Yes, but support to cover partially the accommodation expenses would have been appreciated

Was the logistical support from SCOR adequate?

Yes: 7

No: 0

Comments:

- In our case, no logistical support was rendered by SCOR.
- no support

Were there any logistical difficulties in providing support for the Visiting Scholar (e.g., lodging, food, necessities for teaching, transportation)?

No: 7

Comments:

- No. The University of Costa Rica provided financial support for lodging and food. Necessities for teaching, transportation and additional logistical support was provided by CIMAR.
- Prof Newton have been hosted in my home

Would your institution be willing to host another SCOR Visiting Scholar in the future?

Yes: 8

No: 0

Comments:

- Of course!! We are extremely satisfied with all what was achieved during the visit. We definitely gain a lot of knowledge from his expertise, and his enthusiasm about science is a real inspiration for everybody.

How well has your institution benefited in the following ways?

(1 = low relevance or accuracy of the statement; 5 = high relevance or accuracy of statement)

	1	2	3	4	5
The training provided connections with scientists in other countries who enabled our institute to participate in international or regional projects or networks.	0.0%	22.2%	22.2%	22.2%	33.3%
The training enabled us to implement and teach a new module/class as part of a higher education program.	11.1%	0.0%	22.2%	22.2%	44.4%
The training broadened the scope of oceanographic research conducted by our institute.	11.1%	11.1%	33.3%	0.0%	44.4%
The training enabled the institute to set up a new monitoring or observation program (e.g., time-series station, repeat cruise, tide gauges, moored buoys, etc.)	55.6%	11.1%	22.2%	11.1%	0.0%
The training enabled us to learn new research and/or observation techniques.	0.0%	11.1%	22.2%	22.2%	44.4%

Comments: the training has allowed our research team to apply new methods for working with people (for example, the conduction of participatory GIS workshops with fishers)

Has your institute also benefited from training opportunities provided by other organizations?

(Mark all that apply.)

- International Oceanographic Data and Information Exchange (IODE): 2
- International Atomic Energy Agency (IAEA): 2
- Partnership for Observation of the Global Oceans (POGO): 1
- Intergovernmental Oceanographic Commission (IOC): 1
- Other (please specify): 1 (CELFI-Argentina)

What can SCOR do to increase its visibility and activity at your institution and in your country?

- As a researcher I signed up for SCOR mailing and forward all the information to my colleagues. But would be great if some institutions could also be direct recipients for this mailing list.

- Share the information about your program by using circular e-mail. Sometimes we lack information about the program or funding that benefit us to develop our oceanography
- By developing other types of support for the relevant science & research, for example through involving the researchers and scientists (namely early career ones) of the host (developing) countries in SCOR research projects in various relevant areas, or/and through support of those researchers for short visits/training opportunities in pioneering institutes/universities in developed countries, in where they are enabled to bring back home latest knowledge/know-how/technique/etc. to transfer to students, researchers, etc.
- hold a seminar/conference/workshop etc.
- to disseminate information about the program
- The language is a real barrier of communication. We are limited to invite only French-speaking scholars; The newsletter could be translated in French too.
- Advertise more often
- Have a higher number of subscribers for newsletters; having booths in regional conferences; asking for country representatives to advertise SCOR support in conference presentations
- Update webpages - provide ongoing newsletters

#### How can the SCOR Visiting Scholars program be improved in the future?

- I think the way how the program is working currently is very effective. Not only provides a great opportunity for capacity building in developing countries through financial and logistical support, but also implies a commitment from the host institution and the Visiting Scholar. Probably the one thing that could be improved (but that is not totally up to you) is to increase the amount of proposals funded per year, in order to provide more opportunities to a greater number of applicants.
- Maybe there should be a follow up from SCOR itself about the program, such as like SCOR send another visiting scholar in the future or collaboration about ocean observation or viva verse like SCOR Visiting Fellowship or Students
- By for instance, more SCOR Visiting Scholars programs during each year, or increasing in number of the visit supports offered each year, and also through developing/offering various types of supports between developing and developed countries and the other way round.
- it is an excellent program. very useful. thank you!
- In parallel with individual contact, the announcement should be spread through official channels: Universities and Research institutes to reach a large number of scientists and increase the program visibility
- I will suggest to organize a yearly-based summer school with lectures from well-known professors. That can be hosted in different developing countries each year (like SOLAS does since a number of year). Here the thematic should be more on oceanographic research.
- increase the number of visitors; help to cover accommodation expenses; stimulate the visit to include not only capacity building, but also research, at least preliminary studies in collaboration; having a follow-up program for the collaboration and maybe allocate resources for a second visit.
- Advertise more widely

Appendix III  
Survey of Trainees from SCOR Visiting Scholars<sup>1</sup>

	<b>English<sup>2</sup></b>	<b>French<sup>3</sup></b>
<b>Respondents</b>	69	12
<b>Countries</b>	Afghanistan (1), Argentina (9), Brazil (35), Chile (1), Costa Rica (1), Croatia (3), Ecuador (2), Finland (1), Indonesia (3), Italy (1), Mexico (1), Mozambique (7), Netherlands (1), Slovenia (1), USA (2)	Morocco (12)
<b>Gender</b>	Female: 59.4% Male: 39.1% Unspecified: 1.4%	Female: 58.3% Male: 41.7%
<b>Occupation at time of training</b>	Student: 63.7% Researcher: 36.2% Research Asst./Technician: 5.8% Other: 7.2% <sup>4</sup>	Student: 91.7% Researcher: 8.3%
<b>Age in years at time of training</b>	18-20 years: 2.9% 21-25 years: 31.9% 26-30 years: 27.5% 31-35 years: 15.9% 36-40 years: 10.1% 41-45 years: 8.7% 46-50 years: 1.4% >50 years: 1.4%	21-25 years: 100%
<b>Education level at time of training</b>	Batchelor's degree: 37.7% Master's degree: 31.9% Doctorate degree: 30.4%	Master's degree: 91.7% Doctorate degree: 8.3%
<b>The length of training was<sup>5</sup></b>	Too short: 24.2% Too long: 1.5% About right: 74.2%	Too short: 66.7% Too long: 22.2% About right: 11.1%

<sup>1</sup>Translations done with Google Translate.

<sup>2</sup>Responses related to 8 Visiting Scholars

<sup>3</sup>Responses related to 1 Visiting Scholar

<sup>4</sup>Retired, Professor (x2), PhD student, Post-doc

<sup>5</sup>Comments: Short training time does not allow cultural and personal contacts. In Latin America it was very important to achieve the trust with the group of people; it was ok; I always wish that I had more time to learn even more with [name of trainer], but the time that she spends here was enough to transform people into better researchers; Maybe 1 or 2 days more is likely better; The trainer was excellent; It could have been a few more days; It was a good number of days, especially for people who had no acoustic background. If it had been longer, I think they would've been overwhelmed; Maybe one or two days more would be perfect; Because only two days in my campus; Wonderful

The training was <sup>67</sup>	Too simple: 9.1% Too difficult: 13.6% About right: 77.3%	Too difficult: 77.8% About right: 22.2%
The training met my expectations <sup>8</sup>	Yes: 95.4% No: 4.6%	Yes: 22.2% No: 77.8%
The training helped me (answer all that apply) <sup>910</sup>	learn new information that will be helpful in my current research: 77.3% learned new information that will be helpful in my management job: 21.2% learn new research techniques: 69.7% develop new ideas for future research: 77.3% develop a contact with my trainer: 50.0% develop contacts with fellow trainees: 48.5%	learn new information that will be helpful in my current research: 44.4% learn new research techniques: 33.3% develop a contact with my trainer: 22.2% develop contacts with fellow trainees: 11.1%
The training included the following (mark all that apply)	Lectures: 84.8% Laboratory work: 43.9% Field work: 45.4% Computer work: 62.1% Work in groups: 86.4% Presentations by trainees: 54.6%	Lectures: 88.9% Laboratory work: 22.2% Field work: 22.2% Work in groups: 11.1%
The trainer knew the subject matter well	Yes: 100% No: 0%	

<sup>6</sup>Comments: Working in with the different culture was challenging and hard but rewarding; it was ok; It was complex, with a lot of information to process, but in the end, it turns into a very enjoyable class; I've learned a lot of new things; The practical part of the course was not further developed. Could have more exercises for better assimilation of the content; I think it will be nice to have some more time to train with the analysis programs, like Matlab and Ishmael; medium; perfect; Wonderful

<sup>7</sup>Comments for course in Morocco : Le cours en Francais c'est mieux et plus comprehensible; parce que on avait pas des notions de base de la biologie [The course in French is better and more comprehensible; because we didn't have basics of biology]

<sup>8</sup>Comments: I thought that I had plenty to provide, but the level of basic training of the receiving society was surprisingly low; I am grateful for this opportunity to have this training with such a renowned and friendly person; I know there were some troubles regarding the number of days, but I expected a more intensive course; Could have more practical classes; Very useful learning how to analyze the data; More practices are always good to have; There should be a follow up on the topic in the same region and others; I have learned many things

<sup>9</sup>Comments: Many plans for future projects and activity was established; I don't work with the techniques that [trainer's name] teaches us, but definitely will be useful to get involved in the recent debate about something related to my study object; We learned how to organise our collection room, and will help because was not good before.

<sup>10</sup>Comments from Morocco course: aucun choix , j'étais obligé de choisir un de ces choix.[ no choice, I was forced to choose one of these choices.]

The trainer was enthusiastic about teaching	Yes: 100% No: 0%	Yes: 77.8% Uncertain: 22.2%
It was easy to understand the trainer	Yes: 96.9% No: 3.1%	Yes: 11.1% No: 88.9%
The best thing about the training was	<ul style="list-style-type: none"> <li>• Personal contacts with the scientists in the laboratory</li> <li>• The teacher and learn from isotopes</li> <li>• To learn something new and open a roll of new ideas and possibilities for the future.</li> <li>• The use of photo cameras and games used</li> <li>• The simulation about stakeholders and the consequences of their decision</li> <li>• Exercise on management decisions</li> <li>• It was all interesting</li> <li>• I think the best thing about the training was the team work and the moment in which we had to discuss about the future of a city in a inundation scenario.</li> <li>• Learn new techniques and ask questions about techniques I'm using in my doctorate</li> <li>• Opportunity to acquire new knowledge that can be added to my research.</li> <li>• Meet the speaker who is one of the best in your research field and learn more about the various isotope research techniques.</li> <li>• I was presented to a new research line and to a possible advisor.</li> </ul>	<ul style="list-style-type: none"> <li>• Enrichissement de l'esprit [Enrichment of the species]</li> <li>• Acquisition de nouvelles informations, profondes [Acquisition of new, in-house information]</li> <li>• Le suivi de la formatrice [Follow-up of the trainer]</li> </ul>



	<ul style="list-style-type: none"> <li>• To discover about some techniques that I didn't know, and moreover, to understand better some geologic and oceanographic processes.</li> <li>• The course speaker's experience and the way the course was approached has greatly helped in understanding the content.</li> <li>• The knowledge acquired</li> <li>• The contacts that were made during the stay of the lecturer</li> <li>• For me, this training course provided me with my first major international experience. Collaborating with researchers from an entirely different country was a new and exciting experience for me. Furthermore, I was able to see how the skills I have been learning as a graduate student can truly be applied to any region around the world, which was a very rewarding feeling.</li> <li>• Learning how to use the scripts and computer programs/software to analyze acoustic data learning about new field of research and research method</li> <li>• Learning about the properties of sound underwater, how it affects sampling and analysis.</li> </ul>	
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	<ul style="list-style-type: none"> <li>• Very productive in a positive working atmosphere</li> <li>• To have an insight on different studies and dataset in bioacoustic of different cetaceans species.</li> <li>• The variety between lectures, field work and analyzing the data</li> <li>• Learning new methods and applying them on a data sets in order to understand them fully</li> <li>• Know about pogo program</li> <li>• Todas os itens dados foram bons pois particularmente quase todos itens eram novos e em particular fazer etiquetas. [All items given were good as particularly almost all items were new and in particular make labels.]</li> <li>• The people</li> <li>• Do the sampling in Roca Redonda.</li> <li>• practice with samples (sea-water and individuals)</li> <li>• All the new information and possibilities in the field of work that I learned</li> <li>• The people, the subject.</li> <li>• We have a room collection at the faculty of natural science and this course will help as to improve our room collection</li> <li>• The best thing about this training was the way the</li> </ul>	
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	<p>theory was reconciled and the practice made it easier and simpler to perceive the training.</p> <ul style="list-style-type: none"> <li>• Keeping Scientific Collections in Good Condition and Collections data base.</li> <li>• Everything. The trainers, place, facilities, field trip. There were some minor obstacles, related with the local logistics, but everything went fine</li> <li>• A mix of lectures, lab work and field work, that helped to understand all the little things that could be or go wrong during research. A multidisciplinary approach and team of trainers and trainees.</li> <li>• It was developed in a field environment where us assistants met the true conditions and engage the information given at the lectures right in the field through the sampling campaigns.</li> <li>• Field work, and practical</li> </ul>	
The training was given in my first language or other language in which I am fluent.	Yes: 89.2% No: 10.8%	Yes: 33.3% No: 66.7%
I plan to do the following as a result of my training (mark all that apply)	Pass on the information to my students through lectures: 34.9% Pass on the information to my colleagues: 87.3% Include the information in a presentation at a meeting: 36.5% Include the information in an article I will write: 34.9%	Pass on the information to my colleagues: 88.9% Include the information in a presentation at a meeting: 11.1% Include the information in an article I will write: 11.1%

<p>The training could be improved by</p>	<ul style="list-style-type: none"> <li>• Having a common language, fluent Spanish is required in Ecuador</li> <li>• More practical exercises</li> <li>• To have more exercises and more trainee lectures. The one that had at the end of the training inspires me and it was nice to see other trainee projects and ideas.</li> <li>• it was fine!</li> <li>• include alternative languages for those who do not speak English fluently</li> <li>• The training could be improved by incrementing the number of days of the course</li> <li>• Lectures and projects discussion from the students</li> <li>• In my opinion, it could be more directed to carbonate application and oil prospecting studies.</li> <li>• The students could receive some digital material with the subjects of the training.</li> <li>• Field work</li> <li>• It could have more practical exercises.</li> <li>• The course was great for me. Perhaps a little more practical work would help us to settle lectures' content.</li> <li>• I think there is nothing to be improved. I congratulate the SCOR for this initiative.</li> <li>• I don't have any complaints about the training I received. It was</li> </ul>	<ul style="list-style-type: none"> <li>• Oui [Yes]</li> <li>• Ajoutant autres séances [Adding more sessions]</li> <li>• Langue française [French language]</li> </ul>
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	<p>educational, exciting, and even included some work out in the field. All in all, a great course.</p> <ul style="list-style-type: none"> <li>• Maybe more breaks. I noticed sometimes people were fading towards the end</li> <li>• more days of practical work</li> <li>• Maybe focusing in one topic at a time to make sure everybody completely understand how to deal with this kind of data analysis.</li> <li>• Some lectures were a bit long, making it a bit hard to remain focussed. Maybe make them a little shorter.</li> <li>• Extending it for two more days would provide more time for extra practice of data analysis which is always useful.</li> <li>• Researcher if there is connect till now</li> <li>• Ajudar na manutencao das colecoes da faculdade. [Assist in the maintenance of the collections of the faculty.]</li> <li>• Increased availability of resources and time to carry out research activities with more calm and planning.</li> <li>• Improve the access to field work</li> <li>• Including everyone in the field trip and not just some.</li> <li>• with more resources, because we did not have</li> </ul>	
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	<p>all the resources for conservation the specimen</p> <ul style="list-style-type: none"> <li>• I think the way it was made it easier to perceive.</li> <li>• Showing videos of collections process and whats happen when basic detail is not followed</li> <li>• We had enough, but more practices are always good</li> <li>• With a follow up in different ecosystems. And a temporal analysis of data</li> <li>• Time and logistics.</li> </ul>	
<p>Please provide any additional information here about your training</p>	<ul style="list-style-type: none"> <li>• The time for the training, 2 months, was ok due to language problems, Less than one month had been impossible for fruitful collaboration</li> <li>• It was very good and helpful</li> <li>• to thank you for this opportunity and congratulate for this program.</li> <li>• was very fruitful, didactic and enriching</li> <li>• The training was very comfortable, the concepts were clear. It helped us open our minds and think about possible alternatives.</li> <li>• Although the training is not essential for my PhD, I consider it very important because we scientists must know how to transmit to other people the knowledge we have acquired. And we have to communicate our</li> </ul>	<ul style="list-style-type: none"> <li>• Oui [Yes]</li> </ul>

	<p>results in a manner that is not extremely scientist but more comprehensive to people that are not scientists.</p> <ul style="list-style-type: none"> <li>• I really enjoyed the training, it was very useful for my research area and the speaker was excellent.</li> <li>• It was a good training, where I learned a lot.</li> <li>• It was very informative and definitely good for people who have never been involved with acoustic research. Super solid background information and going through the software was doable and well explained.</li> <li>• Trainer was extremely patient and found time to assist everyone who needed further clarifications. Overall, the training was very useful and provided important information on different topics.</li> <li>• Fisheries oceanography</li> <li>• Gostei muito do curso e espero que exista mais oportunidades [I really enjoyed the course and I hope there are more opportunities]</li> <li>• Gostaria que tivéssemos mais vezes visto que a muita coisa para aprender nessa área. [I wish we had more often seen than a lot to learn in this area.]</li> <li>• It was very good, I suggest it be done</li> </ul>	
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	<p>annually, as a way to monitor the study site.</p> <ul style="list-style-type: none"> <li>• Please do more of these events!</li> <li>• Very knowledgeable trainers.</li> <li>• There was good interaction between students and lecture and helped in the easy assimilation of the contents.</li> <li>• If this training could happen in many times I would not be successful to participate and even help the person who will be training. And I would advise teachers and researchers to have this training because it helps a lot. I also advise universities, research laboratories to do this training.</li> <li>• It helped to connect international researchers in the same region and topic, with different backgrounds that will improve our research Network</li> <li>• Congratulations to the organizers.</li> <li>• We hope to apply all knowledge learned</li> </ul>	
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