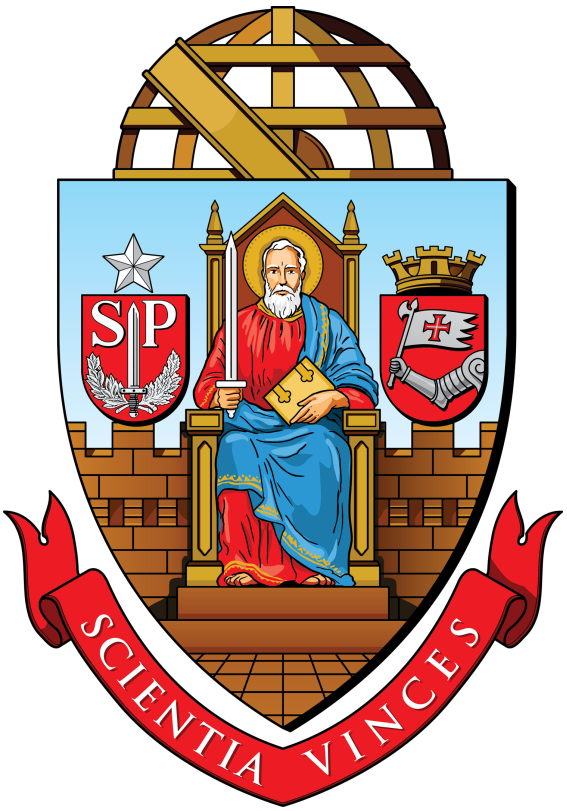

University of São Paulo

USP Institutional Assessment
2010 - 2014

School: Center for Marine Biology (CEBIMar)

SET OF INTENTIONS

Mission

1.1.1 What is the School's mission?

R: The mission of the CEBIMar is to promote scientific advance in the field of marine biology and related interdisciplinary research lines, and disseminate this knowledge to assist public policies towards the conservation of marine biodiversity. To meet this, we pursue the following specific objectives:

1) Undertake scientific and technological research on the different domains of marine biology and marine science, in general;

2) Sustain scientific and technical interchange with other USP units, and other national and international institutions, based on teaching and research collaboration;

3) Communicate scientific findings in different ways, including (i) talks in peer meetings or seminars, (ii) informal interchange while hosting academics or visiting other institutions, (iii) written materials such as peer-reviewed papers, books or book chapters, (iv) audiovisual productions on public exhibits, (v) by electronic media;

4) Teach a range of thematic undergraduate and graduate courses based at other USP units, enrolled in curricular programs in the fields of Biological Sciences, Oceanography and Agronomy.

5) Qualify graduate students (MSc And PhD levels) interested in Marine Biodiversity;

6) Foster outreach in its various possibilities, including actions of environmental education, monitored visits to the CEBIMar and courses on general aspects of Marine Biology to non-academics;

7) Advise public organizations on any issues related to environmental education and the management of marine and estuarine ecosystems.

1.1.2 Is the mission disseminated to professors, employees, and students and implemented in the School?

R: Yes. Ultimate objectives always define academic and administrative policies. The CEBIMar's mission is constantly re-evaluated in regular meetings of the Scientific and Deliberative Boards, in order to maximize the impact and relevance of our teaching, science and outreach. There are meeting to discuss the mission with staff and students.

Vision

1.2.1 What is the School's vision?

R: The role of the CEBIMar, within the USP, has changed dramatically over the last decades, from mainly a host institution to other units of the University, to an autonomous centre, counting with a resident academic community (faculty, graduate students and post-docs). Today, research based at CEBIMar is expressive in different fields of Marine Biology, supporting other important academic activities, namely teaching and outreach, in a direct and natural way.
The evolution of the unit to a reference centre of its kind has been sustained by a still incipient increase of the number of resident faculty, which supervise a substantial group of graduate students and post-docs,

and by collaborative work with several institutions promoting the national and international projection of the centre, today enrolled in broad scientific networks working at the frontiers of knowledge. As described below, this new standard has favored the foundation of an interdisciplinary research group on Marine Biodiversity based at São Sebastião, and a recent submission of an advanced educational proposal at the graduate level.
Counting already with a properly sized administrative staff, the long-term challenge is to double the number of resident faculty (ideally 12) and to build two additional research buildings, and a teaching center. This is compatible to the format found in most respected institutions devoted to the study of ocean and coastal sciences worldwide. In the CEBIMar case, this new dimension would allow covering a wider array of fundamental scientific research, subsidizing both technological innovation in different areas, and more appropriate feedback for scientific-based policies towards the protection and management of coastal habitats.

1.2.2 Is the vision disseminated to professors, employees, and students and implemented in the School?

R: Yes. The vision of the director, and the deliberative board of the unit, is shared with the remaining CEBIMar's employees and students in different levels. Among the different ways of communicating and discussing our mission, institutional presentations describing master plans for the long-term development of infrastructure, and how it is compatible with the unit's mission, together with regular meetings with the heads of division, ensuring an appropriate support to academic activities, are of particular importance. Dissemination among students and other academics associated to the CEBIMar (post-docs, visiting professional scientists, etc.) include, for instance, a program of seminars taking place every other week (the 'cebimars'), leaded by invited speakers who present their work and initiate discussion on topics of general interest, and weekly meetings (the program 'café com ciência') in which questions of particular interest to students and post-docs are debated. These two latter initiatives had proved to be equally relevant to evaluate the relative importance of teaching and scientific activities based at the CEBIMar, and to guide future institutional decisions according to consensual policies. Finally, the 'Symposia of Marine Biology' will be resumed this year. These meetings were traditionally held every other year, and used to be open to the general scientific community. In its new format, plenary talks will be given by invited scientist, and participants will be chiefly students and professional researchers which use the CEBIMar infrastructure and services for their teaching or research. The goal now is to disseminate the general objectives of the institution and foster inter-institutional collaboration accordingly.

Educational proposal

1.3.1 What is the School's educational proposal?

R: Offer full-time, non-stop courses, which can be separated in three different categories:
(i) Support to mandatory courses - These are courses offered in collaboration with faculty from the Institute of Biosciences and Luiz de Queiroz College of Agriculture, at the main USP campus, during which students undertake hands-on tasks in the laboratory and in the field.
(ii) Thematic optional courses for undergraduate students - USP students may strengthen their curricula in Marine Science by taking courses, including both theory and practice, in different areas of this major domain. These courses are continuously updated and frequently given in collaboration with visiting professors.
(iii) Advanced topics for graduate students. These are courses on specific scientific domains, within the expertise range of teaching faculty. Yet, these courses aim the practice of skills of general interest for the education of future scientists. Based on hands-on learning, these courses introduce experimental approaches and theoretical concepts to students enrolled in different USP programs (Zoology, Oceanography, Comparative Biology).
It is also expected a substantial increase of advanced teaching initiatives for the next few years resulting

from:
(i) The establishment of a joint graduate program - Recently, a proposal for the creation of a new graduate program, involving teaching and advising activity from faculty based at different USP units, was submitted. This will be a program on 'Marine Biodiversity', with two main domains; 'Ecology and Evolution' and 'Conservation and Uses of Biodiversity', for both MSc and PhD students. This program will be based at São Sebastião, but will benefit from the input of faculty from the Institute of Biosciences, the Institute of Chemistry-São Carlos, the Institute of Biomedical Sciences, and the Institute of Oceanography, and also from the contribution of visiting scientists at the CEBIMar. At present, the proposal was approved by the USP graduate office, and it is submitted to further review by CAPES, in 2015. This program will give priority to the selection of highly qualified students, and to a close supervision of thesis' projects by specific committees. There is also a special concern to offer a group of courses aiming the independent scientific practice of candidates. Examples include courses on scientific writing, philosophy of science and experimental design. Ultimately, we foster excellence in advance education, ensuring that egress students will be competitive in job applications, and that academic products reach an international quality standard.
(ii) Hosting international courses - During the last few years, CEBIMar faculty and associated professors have collaborated with top specialists, in different fields of marine biology, in international courses for undergraduate and graduate students.

1.3.2 Is the educational proposal disseminated to professors, employees and students and implemented in the School?

R: Yes. All faculty, staff and students, and also associate researchers, including post-docs, are well aware of policies for the institutional development as a teaching center. Also, the whole community shares this vision, and each one actively contributes to meet overall goals, respecting their attributions.

SELF ASSESSMENT

Management

2.1.1 Assess the School's academic-administrative organization.

R: The Deliberative Board, the Scientific Commission and the Director determine the coordination of academic and administrative affairs. The Teaching and Scientific Division, the Administrative Division and the Accounting Sector undertake specific tasks in their competencies. The Deliberative Board is the highest ranked entity in the unit, and its members discuss and define general procedures and objectives. The Scientific Commission determines guidelines for all academic issues, assisting the Director, which is also supported by the Academic and Administrative Divisions to run the unit.
During the recent years, improvements of administrative procedures impacted the unit in a very positive way by favoring the integration between sectors and optimizing work flows within and among them. The increase of the unit, in terms of faculty and, mostly, technical and administrative staff, improved performance in different areas. The administrative organization was reworked intensively, allowing each sector to work in a more integrated and decentralized way. Reforms extended to the use of resources. The control of expenses was made easier, allowing more efficiency.
The new management format also enabled a broader view of systemic processes, which aided the identification of operational bottlenecks, including problems of infrastructure, space use, and workflow.

2.1.2 Describe the School's administrative policies and management model (goals, standards and indicators).

R: The administration aims an optimized use of resources and an efficient feedback to demands. Standard procedures, which may be easily scheduled and are mostly routine, are separated from demands requiring specific approaches and the collaboration of staff from different sectors.
For that, a tight coordination among sectors is critical. The head of the administrative office, together with the director, is the pivot of such articulation. Besides the daily interaction among different sectors, monthly meetings with the head of all sectors and other leaders is essential for the discussion of specific objectives and to prioritize demands. These meetings are also very important to integrate sectors and to improve personal relationships among staff, and also to further communicate the mission of the unit and the ultimate objectives to be obtained at both the short and the long term.
In spite of the hierarchic management model established in the University of São Paulo, the director stimulates open dialogue and the interaction among staff of different sectors, at the various levels of organization. Because the CEBIMar is a small unit, the performance of each sector is assessed directly, without the need of a more formal documentation of institutional indicators. However, there are several parameters, checked as routine, that are used to evaluate the performance of each sector and to identify eventual bottlenecks. Among such parameters, we closely follow the processing of files for the acquisition of equipment, consumables, as well as the contract of services, the feedback to demands for the maintenance of equipment and infrastructure, and the satisfaction of users, both internal or external of the CEBIMar.

2.1.3 List new management practices implemented in the School in recent years and analyze the impact of these practices on core activities and administrative activities.

R: 1. The Administrative Division has now a central role in the attribution of responsibilities and integration among areas, which led to a significant improvement of the performance of each sector separately.
2. In the last few years, the unit has increased the investment in training, which has contributed to an improvement of staff services.
3. We are trying to develop a more proactive attitude based on ambitious though feasible academic goals, like enhancing laboratory space, establishing a graduate program, and enhancing outreach activities.

2.1.4 How does the School manage budget resources and extra-budget resources?

R: The management of resources, both budgetary and non-budgetary, is planned in a yearly basis, but the follow-up of spending, for each allocation, is daily, with a montly revision of the goals. The demands are surveyed by the Administrative Division but planning is undertaken together with the heads of each sector. Cost-benefit and sustainability are guiding policies for contracting.

2.1.5 Comment on the School's streamlining/optimization policies or existing resources (e.g. cost reduction and revenue generation).

R: There are no standard policies, but there is constant concern to meet rational guidelines while purchasing equipment or consumables of any kind. The use of resources is closely monitored by the Administrative Division and is frequently questioned when demands are extensive. Online management systems are always used when possible to avoid unnecessary waste of paper, pinrter cartridges or tonners.
Each sector determines specific policies to avoid waste and optimize the use of resources. For instance, the Maintenance Sector demands only materials for immediate use, and the restaurant manages daily meals, thus avoiding wastage. Overtime labor is tightly controlled by the administration and is used only exceptionally. Demands for materials from the sector of lab and field technicians, responsible for the maintenance of laboratory infrastructure and boating, is restricted to what is essentially needed for teaching and scientific activities. Resources used in lab space under the supervision of CEBIMar faculty are

obtained with research grants. Lab space of common use are also supported by CEBIMar's institutional funds. The use of boats is restricted to teaching and research, and fuel is purchased weekly, to cover scheduled demand, with no stock.
The CEBIMar also generates income, which is used for limited infrastructure improvement and the maintenance of equipment. These funds are mostly obtained from the use of lab space and infrastructure, which is charged to external users.

2.1.6 Identify the School's actions in regard to environmental sustainability for the rational use of consumer goods and natural resources (e.g., water and electricity), as well as the management and treatment of effluents and waste (chemical, biological, radioactive, and recyclable, among others).

R: Since 2012, a CEBIMar commission composed by faculty, non-faculty staff, students and post-docs was created to articulate actions of environmental management and education in the unit. Issues regarding the rational use of consumables were discussed in this commission and, as a result, we were able to almost eliminate the use of plastic, such as disposable glasses, and greatly reduce the consumption of water and electricity (in alignment with USP major programs PURA and PURE, respectively). Recently, a sewage treatment unit was implemented. This is an experimental unit operating only partially at present, but adjustments are underway for its use in full capacity. At present, most facilities in the CEBIMar still rely on septic tanks.
This newly commission also works intensively in recycling programs (fluorescent bulbs, computer junk, batteries, etc.), or in alternative solutions to dispose certain types of residuals, such as pruning and food waste. We have internal rules aiming to proceed the correct disposal of produced by the users.

2.1.7 Comment on how appropriate the School's academic and administrative information systems are.

R: An internal bulletin was created to disseminate academic and administrative information of the unit. Besides, the interface 'Contact Us' was created as an open system accessible to all citizens, staff and students. All demands of this latter channel are managed by the director.
Owing to a gradual increase of the number of users using the CEBIMar as a marine station supporting their research, the project database and its management system were improved to allow merging the information of project specifics and information of participants in a single platform. The system is operating very well and should be expanded in the near future as to assist the management of services provided by the CEBIMar (lodging, restaurant, field and lab technical support, etc.).

Connections and cooperation

2.2.1 Analyze the connections and cooperation established with internal and external entities to achieve academic goals, considering the following different levels:

a) among the School's departments, academic committees and academic support boards (centers, others);

R: The CEBIMar is a 'specialized institute', too small to be organized in departments. For this same reason, there is no need to create multiple academic commissions and respective support entities.
The Scientific Commission reports to the Deliberative Board on any issues related to research activities in the CEBIMar. Academic issues are handled within the Teaching and Research Division. At present, two staff members are fully dedicated to the support of undergraduate and graduate programs. Even with the creation of a new graduate program, based at the CEBIMar as predicted, there is a priori no demand

justifying the expansion of this section.

b) among core activities (undergraduate and graduate programs, research, culture and extension);

R: Because there are at present no undergraduate or graduate programs based at São Sebastião, our teaching has served a very heterogeneous student assembly, from different USP units, which restricts the coordination of teaching activities at these two levels.
In contrast, there is a strong interplay among graduate teaching, research and outreach. The contents of graduate courses are related to scientific interests of respective responsible faculty, which favors a more efficient teaching of scientific practice, beyond the discussion of fundamental theoretical concepts.
There is still a strong interaction between research and outreach activities at the CEBIMar. Examples can be cited for the different interfaces linking the CEBIMar and the non-academic public. Outreach courses on general aspects of Marine Biology, or Coastal Habitats, are regularly updated as to incorporate concepts and processes, validated to our study region through scientific evidence. The build-up of information on the diversity and distribution of coastal marine organisms has been of paramount importance to sustain argumentation in public debates for the discussion of alternative models of local economic development. The contribution of the unit in the evaluation of proposals for the expansion of the São Sebastião Harbor has been particularly notorious, and widely broadcasted through public media.

c) with other teaching and research Schools, specialized institutes, complementary boards and/or entities associated with the University, if it is the case;

R: Coordinating academic activities with other institutions is at the heart of the CEBIMar's mission. The unit was created as a marine station to support scientific research of USP faculty at the Institute of Biosciences (IB). From there to present days, this unit remains the most important partner of the CEBIMar. Collaboration between the two units covers all sort of academic activities. Double affiliation is now a possible means of further interaction. One IB professor is already fully enrolled in the CEBIMar and others will likely follow during the next few years. Because positions for new faculty are presently suspended and will be very limited during the next administrations, double affiliation may be very important for the academic development of the unit.
Beside the IB, there is also frequent cooperation with researchers of other USP units. We highlight the importance of scientific collaboration with the Institute of Biomedical Sciences, the Institute o Chemistry, the Faculty of Veterinary Medicine, the Oceanographic Institute, the Faculty of Pharmaceutical Sciences, the School of Arts, Science and Humanities and the Museum of Zoology. The joint effort of faculty from all these units led to the creation of the Research Centre for Marine Biodiversity (NP-BioMar), which is funded by the USP but also benefit from indirect funding by other agencies. As detailed in other sections of this document, the founding of the NP-BioMar fostered the creation of a new inter-unit graduate course based at São Sebastião (Marine Biodiversity).

d) with other institutions in Brazil and abroad (e.g., Multidisciplinary Master and Doctoral Programs between two Schools, Undergraduate and Graduate dual degree programs, involvement of students and professors in scholarly exchanges, cooperation agreements, research networks, and integrated research projects, among others).

R: Partnerships with other public universities in the State of São Paulo have been rapidly growing during the recent years, mostly because young researchers, with already expressive contribution in the broad field of Marine Biology, have found a place in the professional academy. This is the specific case of faculty at the Federal University of São Paulo (UNIFESP) and at the Federal University of ABC (UFABC). These faculty coordinate research projects hosted by the CEBIMar, under the collaboration of our own faculty. Collaboration with the University of Campinas (UNICAMP) is traditional, including major, large-budget

research projects and the publication of national and international reference books on the marine biodiversity of Southeastern Brazil. There is still scientific collaboration with other Brazilian universities, mostly federal universities from other states in the southeastern and northeastern regions.
Finally, the intensive collaboration with international institutions should be mentioned. During the last five and a half years (2010-2015), the CEBIMar hosted 41 stays from 26 foreign academics, coming from 15 different institutions; 4 from South America, 5 from Europe and 6 from North America. Professional researchers are the ones visiting us the most (55%), followed by graduate students (20%), post-docs (18%) and lab and field technicians (7%). The collaboration with these visitors has intensified over the period, with the yearly overall sum of such stays (in days) increasing from a minimum of 13 d, in 2013, to a maximum of 734 d, in 2015. Note that this last number refers to visiting academics during the first semester only. This increment is not only a result of a rising number of visitors, but mostly of an increased average duration of stays. More and more often we are hosting long sabbatical stays, during which intense teaching and scientific collaboration takes place.
All these initiatives are a result of scientific collaboration in specific research lines, coordinated by faculty associated to the CEBIMar and scientists from international institutions. Such cooperation has been strengthened by visits of our academics to these partner institutions, either through research fellowships, or through specific calls for short-term interchange with renowned universities in the field. Up to present, such initiatives have been efficient and provided our unit substantial international visibility, but the celebration of specific scientific agreements, including extensions of general preexisting cooperation contracts between the USP and these universities, should take place during the few coming years.

Infrastructure

2.3.1 Briefly comment on the development of School infrastructure in recent years, identifying, in relevant cases, difficulties that hinder improvement of the School's academic standards (e.g., in regard to physical area, classrooms, study rooms, faculty offices, libraries, specific laboratories and multi-user laboratories, access to computers, living areas, leisure and food areas, among other possible issues).

R: During the last few years, investment on refurbishing and equipment supported the increasing demand of infrastructure to teaching and research activity.
Namely, we renovated areas initially used for exhibits of living organisms, or used for specific scientific projects that had already finished, and are now used as small class rooms, or even meeting/working rooms for research groups. These were structurally minor changes, but they allowed a substantial increase in our teaching capacity. At present, it is possible to support 3 to 4 simultaneous courses in the unit.
Regarding research, a partially outdoors area within one of the main buildings was adapted to a wetlab in which experiments demanding open, flow-through systems can be carried out. Also, the pipelines distributing compressed air and gas to all laboratories were reformed, which greatly improved work conditions.
A more important improvement will be the creation of the infrastructure hosting the activities of the Research Centre for Marine Biodiversity (Np-BioMar). At present, the project for this facility is close to be finished, but supplementary funds will be needed for its building. Considering general infrastructure, this will be the most important challenge our administration will face in the next few years. In the meanwhile, overhead funds of research projects have been used to cover expenses related to the installation and maintenance of provisional laboratories, based on the adaptation of commercial shipping containers. Although this is not a definite solution, these new working areas had sustained an increasing demand for laboratory space in the CEBIMar.
Other improvements include the revitalization of external areas, in a joint effort with the central administration of the main USP campus (illumination, accessibility, etc.), and the installation of an experimental sewage treatment unit.

Technical and administrative employees

2.4.1 Does the School have a specific system (goals, indicators, performance standards) to assess the activities of technical and administrative employees, in addition to the institutionalized processes outside the School?

R: There are no a priori goals nor any official guidelines. However, activities of all staff are followed daily by respective heads of division, and in meetings with the Director's Office.

2.4.2 Report the School's policies concerning the improvement of technical and administrative employees in regard to:

a) Integration of recently hired employees;

R: The Division of Human Resources introduces new staff to the unit and instructs them on general procedures. The head of the respective division determines specific training. The Administrative Division is always available for additional explanations.

b) Incentives for professional improvement;

R: The unit makes use of the 'staff training' budget for professional development of employees of different sectors, and to encourage their attendance in specific training programs and courses offered either by the USP School or by the Central Administration. The Director's office strives to concede these requests whenever possible. Some courses are freely available for lab technicians, and those are also constantly trained by the Faculty/Post Docs in day by day activities.

c) Criteria for career development;

R: Professional advancement is guided by criteria established by the USP central administration. Teamwork, general understanding of processes, capacity of integrative collaboration, and quality-directed management are guidelines for the professional development of staff and their sectors.

d) Institutional engagement.

R: The administration fosters institutional engagement through regular meetings, informal interchange and discussions on how to improve and innovate. The Diretor's office is open to any kind of suggestions made personally or through our website.

Faculty members

2.5.1 Analyze the progress of the School's faculty profile on the basis of core activities developed in the last 5 years (hiring, career development, job contracts, and retirement, among others).

R: From the 6 CEBIMar faculty hired at present in the RDIDP (40 h a week in exclusive dedication) regime, one was hired during this period, another one progressed to Associate Professor, and a third one successfully requested double affiliation in his principal unit (IB), for a period of three years. This facts

demonstrate a substantial evolution of the CEBIMar's faculty board. During this period, no faculty retired. We also have the collaboration of an Emeritus Professor.

2.5.2 Does the School have a policy concerning the hiring of professors (e.g., internationally published public notices)? Comment on how appropriate this policy is in regard to the School's profile and its development projects, including new areas such as attracting new talent for academic careers.

R: Until recently, there were only three faculty members in the CEBIMar and further positions were opened in wide scientific domains, avoiding only substantial overlap with consolidated research lines in the unit, as an attempt to obtain a large number of applications and thus increase the chances to select highly qualified professionals. More than two tens of candidates applied for the two faculty positions opened since 2007, showing this was a well succeeded strategy. During the last USP administration, we requested three faculty positions, now directed to 'Community Ecology', 'Evolution and Phylogeography' and 'Management of Marine Areas', intending further coverage of main scientific fields related to Marine Biology. The requests for the former two positions were approved. At that time, we widely announced these available positions, counting with the support of other national and international institutions alike, as well as professional academic associations, which assisted us in publicizing these job opportunities. However, along with a USP administrative policy of spending cuts, the calls for these positions were suspended. Either way, the scientific domains cited above are still the ones we wish to promote in future occasions to increase our faculty size. At that time, we will certainly use new announcing possibilities in well-established internet portals, of either general (e.g.: naturejobs/science/; researchgate.net/jobs), or more restricted scientific interest (ex: marinecareers.net/jobs; aslo.org/employment/jobs), besides other means already explored in the past.

2.5.3 Describe the primary individual indicators concerning the quality of the work performed by the School's faculty.

R: The CEBIMar's mission covers objectives of different nature, equally covering the three main pillars of academic activity: research, teaching and outreach. The productivity of faculty in these three main categories is markedly heterogeneous. While two of us are mostly dedicated to undergraduate teaching and outreach (guided visits, training courses for elementary and high-school teachers, general courses on marine biology and coastal habitats for non-biologists, acting on boards/councils etc.), the other four are mostly dedicated to teaching (undergraduate and graduate) and scientific research, as well as an strong outreach component. Therefore, it is not expected that all faculty will attain the same goals. The quality of faculty production is thus evaluated considering specific competencies.
The load of administrative work is evenly attributed among all faculty members, respecting personal vocations and skills.

2.5.4 In addition to the institutionalized assessment processes outside the School (CAPES - The Brazilian Agency for Coordination of Improvement of Higher Education Personnel, CNPq - National Council for Scientific and Technological Development, USP - Office of the Vice-President, CERT - The USP Especial Committee of Labour Work, and CPA - The USP Permanent Assessment Committee), does the School have a specific system to assess its faculty members' activities? If yes, what kind of work is developed?

R: Given the attributions specified in the item above, the performance of faculty is closely followed by the directory board, which maintains an open communication environment to optimize and increase the quality of faculty's production. However, there is no systematic procedure to complement the evaluations

from the institutions cited above or others.

2.5.5 Does the School have a Pedagogical Support Group (PSG) or any type of pedagogical advisory program to support the work of professors? If yes, what is the work developed? Characterize the adherence of professors to the proposed activities.

R: There is no Group for Pedagogical Support because the CEBIMar is a small institution and hosts a very small faculty.

2.5.6 Report whether the School provides conditions for improving the teaching of the faculty body, analyzing its importance in regard to the existing educational proposal. If the School does, what are the activities developed? Comment on advancements and difficulties.

R: There is no specific program in the unit for the improvement of didactics. Because the faculty size at the CEBIMar is very small, any obstacles for adequate teaching, mostly instrumental, are debated by the Scientific Commission and the Deliberative Board. Recent upgrades of class rooms, consensual among faculty after discussion, made possible the use of multiple media in all these rooms, which has making teaching easier.
Most courses taught at CEBIMar are characterized by a strong hands-on practical component. Improvements in the circulation system of compressed air has rendered much better means for the maintenance of living organisms, for both observation and class demonstrations, and the acquisition of new optical equipment allowed attending larger classes.
A very positive aspect, intensified in recent years, has been the collaboration of visiting scientists, mostly from abroad, in graduate courses, or courses on advanced topics in Marine Biology. This partnership has contributed to increase the set of thematic courses, as well as the quality of courses already taught in the unit. The main challenges remaining are (i) seeking for travelling and maintenance funds for visiting researchers, as a means to teach at least some of these courses in a more regular basis, and (ii) provide proficiency in English language to academic and administrative staff, making them capable to offer adequate support to these teaching initiatives.

2.5.7 Provide information on the School's policy concerning the valorization and development of teaching careers in regard to:

a) Integration of recently hired professors;

R: As explained above, during the last eight years only two new faculty positions were created in the CEBIMar. In both cases, these were experienced academics, with previous professional experience in other universities, which immediately assumed leading posts and brought with them established research groups. If future positions are to be taken by less experienced candidates, initiating their professional academic activity, proper measures will be undertaken to ensure these new faculty will not be burden with excessive administrative work, but take advantage of adequate infrastructure to resume field and laboratory research activity and build up their own research groups. In addition, collaboration with other CEBIMar faculty, both in teaching and research, will be encouraged in all potential synergisms.

b) Incentives for improvement and post-doctoral programs;

R: The Director Office strives to provide all necessary conditions for faculty to further improve their work. There are several different opportunities for scientific discussion within the unit. Besides a free-access policy among faculty offices and laboratories, the debate of ideas, scientific trends and networking take

place at different levels. Two regular internal meetings, taking place every 2 weeks, the 'CEBIMários' and 'Café com Ciência', both organized by post-doc fellows, are good examples of forums of intensive and productive exchange.
Most faculty had already undertaken post-doctoral leaves and there is incentive for professional improvement through longer sabbatical leaves. Over the last five years, no faculty left the unit for such longer stays, but it is likely they will be requested during the coming years.

c) Institutional engagement.

R: The unit meets all requirements for excellence in its domains. There is clearly room for improvement, but the existing infrastructure and the services provided by the academic and technical staff are favorable for high-quality teaching and research. The CEBIMar faculty are aware of such ideal conditions and find ways to perform accordingly. This is an attitude acknowledged in non-academic circles, mostly within São Sebastião and Ilhabela counties, and among our peers from other institutions.
There is also concern to prioritize the development of the unit, as a whole, in relation to specific advancement of a given laboratory or research line. Along with this principle, new laboratory spaces were designed as to serve all faculty and respective groups, as well as visiting researchers, thus fully exploiting the scientific potential of the unit. This way we avoid unnecessary redundancy of equipment and services, optimizing the use of available resources.
This year, the CEBIMar celebrates its 60th anniversary. Remarkable institutional development during the last 10 years is presently acknowledged by our peers, who respect the quality of our performance in all academic activities. Faculty members are fully aware of this trajectory and committed to the development of our institution.

2.5.8 How important is the participation of professors in support centers, complementary boards or specialized institutes for the achievement of the School's goals?

R: There are no support centers, or complementary organs, associated to the CEBIMar. It should be pointed out, however, that the Research Centre for Marine Biology is based in our unit. Apart from the CEBIMar, faculty from other seven USP units joined this team. Four of the six CEBIMar faculty are research members, including the ex- and present scientific vice-chair. The creation of this research centre has stimulated multidisciplinary research and has provided a foundation for the preparation of a new graduate program, also based in our unit.

Teaching and learning processes

2.6.1 Assess the School's teaching and learning processes, including the teaching means and techniques and their coherence with the educational proposal.

R: As mentioned above, the unit offers a series of undergraduate and graduate courses that are, respectively, part of curricula of majors and programs based at other USP units. In addition, the CEBIMar also offers extracurricular courses covering advanced topics in Marine Biology, usually in collaboration with visiting professors coming from other Brazilian institutions or from abroad.
All courses are given following an intensive schedule. This way, students may travel to São Sebastião without hindering regular activities at their units. Besides, the courses offered at the CEBIMar are usually organized in modules comprising both theoretical and practical tasks which should be taught in sequence and without interruptions. Such an 'immersion' regime, alternating theory and practice, both in the field and in the laboratory, clearly favors an efficient learning of contents.
The conditions to teach Marine Biology in the unit are unique. Class rooms are air-conditioned and equipped with different didactic resources, and the CEBIMar area includes two sandy beaches delimited by rocky shorelines, and large patches of beach vegetation, which can be easily visited. Class rooms and

supporting laboratories are also supplied with running seawater and compressed air which make possible small experiments and demonstrations under controlled conditions, and the maintenance of living marine organism for observation. The operation of small boats allows studying the pelagic environment, from shallow to 40 m depth waters along the São Sebastião Channel. A weather stations and an oceanographic buoy deliver real time environmental data that can be readily retrieved and analyzed in class.
Because different coastal habitats can be reached within a few minutes, by either foot or boat, a typical teaching day may include field activities over the morning, data analyses or observations of biological material on the early afternoon, and a final theoretical class at the end of the day to consolidate any concepts addressed. Since students are lodged and have their meals in the CEBIMar, scheduling out-of-class teamwork is easy. The outstanding teaching conditions available at our unit, combined with adequate teaching approaches (theory and practice), promote efficient a dynamic learning in all academic levels.

2.6.2 Is the profile of Undergraduate and Graduate alumni used as reference to define teaching and learning processes? How so?

R: Undergraduate majors and graduate programs counting with the participation of CEBIMar faculty are based in other USP units. There is no direct participation of none of us in the definition of any pedagogic guidelines.
A proposal for the first graduate program based in our unit (Marine Biodiversity) is presently being evaluated. If approved, and during its existence, we will certainly used information on the profile of egress students and, mostly, on their professional activity to reappraise the characteristics of the program.

2.6.3 Describe the incentive policy intended to encourage the production and use of teaching materials (e.g. books, movies, videos, online material, software, prototypes, simulators and others) directed to the School's teaching in the Undergraduate and Graduate Programs.

R: There are incentives in the unit for the production of our own didactic materials. Main products comprise general Marine Biology textbooks, as, for instance, the recently published e-book 'Biodiversity of Benthic Ecosystems of the Northern Coast of São Paulo State', organized by colleagues of the University of Campinas, but with important contribution of CEBIMar faculty, identification guides of marine invertebrates, some already published and others still in preparation or in press, thematic folders, and audiovisual productions, detailing interesting features of coastal habitats or the life-history of marine organisms. Special mention should be made to the 'Cifonauta' project, a marine biology image database (http://cifonauta.cebimar.usp.br/), which is reference for anyone interested in the marine biodiversity in the southeastern Brazilian coast.
There is also incentive for the utilization of diverse didactic resources, including those written in foreign languages (specially English), for the teaching of either undergraduate or graduate courses. There are important resources published in Portuguese, but the most part of references on more specialized subjects are only available in English. The use of these latter materials, however, from early undergraduate education, will certainly help students to become proficient in English, which is a very important part for their scientific education. It is common practice for all courses to list recommended updated references, but students are free to seek for an additional materials they find appropriate.

2.6.4 List the primary forms of academic assessment used in the School's Undergraduate and Graduate Programs.

R: As clarified above, there are at present no undergraduate or graduate courses based in the unit.

2.6.5 In the School, is there any program encouraging technological innovation,

entrepreneurship, or junior enterprises? Analyze the results.

R: There is no such program in the unit.

Undergraduate program

2.7.1.1 Describe the primary advancements attained in the School's Undergraduate Program and the difficulties faced in the last 5 years.

R: During the last 5 years, three new optional undergraduate courses were created, all of them offered to students pursuing majors in Biological Sciences, Teaching in Natural Sciences and Oceanography based at other campuses of the University of São Paulo:
CBM 150: Sampling in Population Ecology. In this course, the sampling theory is revised, followed by an in-depth cover of more advance topics. Using both theoretical and practical approaches, students are trained to execute sampling protocols tailored to specific situations.
CBM 160: Effects of abiotic variables on marine biota. The objective of this course is to introduce the fundaments of oceanography and meteorology to biologists, without the need for students to have previously taken advanced courses on physics and calculus.
CBM 170: Introduction to Marine Biology. This course provides a general and interdisciplinary overview of marine ecosystems, and an introduction to processes ruling the dynamics of marine communities.
As specified above, indoor facilities were refurbished and converted in new class rooms, which has made possible teaching more courses simultaneously. Most difficulties arise from limitations already described in the last evaluation of the unit. In spite of a well-established technical and administrative staff, which could support a substantial increase of activities, the faculty members are just a few. In particular, a mode adequate faulty size would allow the offer of a wider array of undergraduate courses, benefitting a larger number of students.

2.7.1.2 Characterize the connection and cooperation among the School's Undergraduate Committee and the Courses' Coordination Committees.

R: There are no such commissions in the unit.

2.7.1.3 List the relevant innovations, initiatives, and tendencies in teaching of the School's Undergraduate Program in regard to:

a) New Programs and Courses;

R: There is no undergraduate major based at the unit, and there are no expectations at present to create one. However, three new optional courses are now offered to students from other USP units, as detailed above. The intention is to further increase the number of undergraduate courses as to cover main topics of Marine Biology. With the eventual increase of faculty members in the long run, it will be possible to create a specialization in 'Marine Biology', for students pursuing main undergraduate majors in Biological Sciences or Oceanography. Nevertheless, this still remains a remote possibility.

b) Increase in the number of slots;

R: The number of students admitted in CEBIMar's courses depends on the demand for laboratory infrastructure and technical services. However, the number of registered students rarely exceeds the maximum number of students that can be admitted. Therefore, an increase of the number of students

enrolled in our courses will mostly depend on the increase of student admissions at their host units.

c) Attraction of talented students;

R: As above, the attraction of talented students will depend on admission policies of main programs.

d) Changes and flexibility in the curricular structure;

R: The CEBIMar would welcome students from additional units, coming from academic backgrounds other than Biological Sciences or Oceanography. As above, the possibility for more flexible curricula will depend on the deliberation of undergraduate offices at the interested units.

e) Renewal, updating, and use of new teaching methodologies.

R: Teaching approaches tend to evolve in accordance to the access to new technologies and to the exponential increase of bibliographic references, readily available to students. In general lines, there is a tendency to reduce expositive theoretical classes to the very essential and to leave more room to the guidance of directed studies, demonstrations and other practical classes.
Still regarding instrumental issues, the CEBIMar has made an effort to gear up classrooms, make available new equipment and provide an adequate supply of resources as to help students applying theoretical knowledge in the laboratory and in the field. Automated systems for sampling of abiotic data are also interesting tools for student's training.

2.7.1.4 Characterize the monitoring of the School's Undergraduate teaching. Describe the procedures and indicators used in this process.

R: Although a partial metric, we followed the number of admissions in our courses to assess their impact on the overall education of students within their respective major programs. In some of our courses, students' evaluations have proved to be very useful. However, this is not a common practice in the unit. We consider discussing the pros and cons of a standardized student evaluation, as an attempt to obtain additional parameters to assist us updating our courses.

2.7.2.1 What is the profile of Undergraduate alumni pursued by the School?

R: There are no undergraduate courses in the unit, and, therefore, we aim the academic profile aspired for major programs at the units we support.

2.7.2.2 Are the courses syllabuses and subjects of the School's Undergraduate Program consistent with this profile?

R: In general, the pedagogic proposals we submit to the undergraduate offices at our partner USP units are approved after only minor amendments. This fact indicates that we submit contents that meet the aspired academic profiles.

2.7.2.3 Are the School's teaching and learning processes consistent with this profile?

R: The CEBIMar's support to undergraduate education is mostly focused on the provision of optional courses. As in the USP partner units, optional courses aim professional practice, with an important hands-on practical component. This way, undergraduate teaching in the CEBIMar is aligned to the approach implemented in the units hosting these undergraduate programs, and, therefore, in accordance to the desired profile for graduates.

2.7.2.4 Describe the socioeconomic characteristics of the School's Undergraduate students. Comment on the degree of representativeness of students from public schools, as well as that of students who reported being African-descendant, of mixed race, or indigenous, attending the School's courses.

R: These characteristics can be required only at the Undergraduate Offices of our partner USP units.

2.7.2.5 Comment on the evolution of candidate/slot ratio in the Entrance Examination in the last 5 years observed in the School's programs.

R: These characteristics can be required at the Undergraduate Offices of our partner USP units.

Does the School have policies to decrease dropout rates in its Programs? Comment.

R: This information can be required at the Undergraduate Offices of our partner USP units.

2.7.2.7 List the support services provided by the School to students.

R: Three employees from the academic staff (i) schedule all courses and update all respective information, (ii) book lodging and restaurant services during the stay of students in the CEBIMar, (iii) welcome students, and explain them the norms applied to all visitors, and (iv) provide any assistance when needed. Lab technicians support the courses.

2.7.2.8 Does the School have any system to monitor the training process of Undergraduate students? Comment.

R: No. This follow-up is undertaken at students' host institutions.

2.7.2.9 Indicate incentive actions intended to promote Scientific Training for Undergraduate Students, participation in studies and research groups, among others.

R: On average, the CEBIMar hosts two students enrolled in the scientific initiation program (PIBIC/CNPq) per year, and eventually students with FAPESP scholarship. Because there are no undergraduate programs based in the unit, the impact of this program in the unit is modest. The students undertaking PIBIC's projects in the unit need to used their vacation time to finish their laboratory and field activities while in São Sebastião. Later on, they may analyze the data and discuss results under the supervision of their advisors at distance.
Post-docs often supervise these projects. As other students and research fellows affiliated to the CEBIMar, students joining the scientific initiation program actively participate in ongoing research projects and in scientific debates taking place at different regular meetings held in the unit.

2.7.2.10 Does the School have any formal relationship with Undergraduate alumni? Is there any system to maintain ties with Undergraduate alumni?

R: The professional career of graduates is followed by partner units hosting these programs.

2.7.2.11 Comment the professional practice fields and skills required by the School's alumni.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

2.7.2.12 Comment on the performance of the School's alumni in professional exams, and exams from the medical field and similar contexts.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

2.7.3.1 Indicate whether there are initiatives concerning distance learning in the School.

R: At present, the CEBIMar has no intentions to create any graduate majors, either in a distance-learning or a traditional format.

2.7.3.2 Describe primary Undergraduate extra-curricular activities in the School.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

2.7.3.3 Comment on the impact for the Undergraduate Program from academic agreements, supervised training programs, and agreements with the public and private sectors, as maintained by the School.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

2.7.3.4 Relate the School's main inter-disciplinary projects.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

2.7.3.5 Describe the School's monitoring and tutoring programs.

R: This information may be obtained in the units hosting the undergraduate programs supported by the CEBIMar.

Graduate program

2.8.1.1 Comment on innovations, initiatives and other relevant tendencies of the School's Graduate Programs in regard to:

a) New Programs, merger or division of old Programs;

R: The preparation of a proposal for a new graduate program based at the CEBIMar, but with the collaboration of faculty from other USP units, was the most relevant pedagogic project over the period this report is concerned. Although there were plans to create such a program for a long time, the implementation of the USP funded Research Centre of Marine Biodiversity brought faculty together to foresee multidisciplinary scientific fronts, which also favored the development of a pedagogic project providing a solid training in this area. The proposal for this new program was already approved by the USP Graduate Office, and submitted for approval and grading to CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior; the federal agency regulating graduate education in Brazil), taking place this year.
This will be a program in 'Marine Biodiversity', starting with the collaboration of 12 faculty belonging to 5 different USP units; CEBIMar (3), IB (5), ICB (1), IQSC (1), IO (1), plus an additional professor with double affiliation (CEBIMar and IB). The proposal is structured along four main research lines: 'Ecology', 'Biogeography & Evolution', 'Morphology, Physiology and Developmental Biology' and 'Bioprospection'. Student candidates for MSc and PhD levels will be accepted.
One of the main characteristics of the proposal is a considerable investment in education quality, which we hope to achieve by implementing a thoughtful evaluation of students, by defining ways in which students' performance will be closely followed and by providing an adequate offer of curricular courses. Among other initiatives, thesis committees will help advisors to evaluate reports (which is not a common practice in Brazil), and courses endowing students with the skills needed for an independent scientific practice will be offered in a regular basis. Although they will be not obligatory, we expect that these more general courses will attract most of the students enrolled in the program. In a second stage, students will then take more specific courses, related to the research lines cited above.

b) Professional Master's Program(s);

R: CEBIMar faculty do not collaborate in any of such programs and there are no intentions to create them in the unit.

c) Increased number of slots;

R: Regarding the programs already counting with the support of CEBIMar faculty, an increase of the number of students will depend on the admission policies of the USP units managing these programs.

d) Changes and flexibility in the curricular structure;

R: Because there is still no graduate program based in the unit, there are no means to assess the need for changes or for a more flexible curricular structure.

e) Flexibility and incentive(s) for its Graduate Programs to cooperate with other institutions and the society's productive sectors;

R: Because there is still no graduate program based in the unit, there are no means to assess the potential for collaboration with other graduate programs, other educational institutions or other economic

sectors.

f) Readjustment of research projects and lines of research, so as to follow or encourage advancement in the field;

R: Because there is still no graduate program based in the unit, there are no means to assess the need for updating research lines, although we anticipate this will be a constant practice.

g) Renewal, reformulation of courses (objectives, syllabuses, assessment, language, professors) and use of new teaching methodologies;

R: In the case of graduate courses offered by CEBIMar faculty, but linked to programs from other USP units, contents are constantly updated, according to the feedback of students or other criteria faculty wish to meet. Updates are also often a result of scientific advance, especially in the case of courses related to more specific research lines. New methods and approaches are tested and applied as teaching facilities are upgraded, as commented in other sections of this document.
When courses are given in collaboration with foreign visiting researchers, English is the official language. This has not been an obstacle so far. Some of these courses are often given only once, seizing the opportunity of sporadic visits, but others may be offered more regularly, especially those of special interest for the graduate program we intend to implement.

h) Attention provided to the inclusion of professors who are provisional hires, especially those who need to extend this phase;

R: While preparing our graduate program in Marine Biodiversity, we invited USP Faculty with regular scientific production, willing to offer a course aligned with the philosophy of the program. These are conditions to be maintained later on, when considering requirements of another faculty, including those on probation, to join the program.

i) Others.

R: There are no other issues to be highlighted.

2.8.1.2 What is the percentage of the School's professors linked to Graduate Programs?

R: Four out of the 6 CEBIMar faculty are accredited in graduate programs from other USP units (67%).

2.8.1.3 How are the School's Graduate Programs assessed?

R: In the case of ongoing graduate teaching in the CEBIMar, the evaluation of courses takes place in the host USP units. While preparing the proposal for the new graduate program, the courses initially submitted were reformatted when necessary, either to cover a broader subject or to avoid overlap of contents. There are still no established procedures to evaluate courses, once they will be effective. Among other parameters, student evaluations and the number of attendees may be used. In addition, collaboration with other faculty will be considered whenever it will likely improve the course.

2.8.1.4 Analyze the performance of the School's Graduate Programs considering the last two

assessments performed by CAPES.

R: Not applicable.

2.8.1.5 Note national and international awards and other indicators of quality received by the School's Graduate Programs in the last 5 years.

R: Not applicable.

2.8.1.6 Comment on the national and international impact of scientific and technological knowledge generated by theses and dissertations.

R: Not applicable.

2.8.1.7 Comment on the impact of the involvement of the School's students and professors within the Graduate Program in scholarly exchanges.

R: Taking into account only the courses offered by CEBIMar faculty to programs hosted in other USP units, there is evidence indicating that national and, mostly, international mobility have been of paramount importance to graduate education in all fronts. As detailed in other sections of this document, scientific collaboration with other institutions has been primarily a result of independent initiatives of each faculty member. Altogether, however, such actions have inserted the unit in worldwide scientific networks on Marine Science. Visiting researchers become frequently collaborators in courses and co-advisors of students enrolled in different USP graduate programs. Faculty and student mobility to laboratories of partner institutions had become possible through travelling fellowships and regular research grants. As an additional contract to regular FAPESP graduate fellowships, the BEPE program, supporting travelling and maintenance expenses abroad, has been of remarkable importance for student mobility.
The benefits of such initiatives are notable. Among the main gains, one could point out the strengthening of research lines, the increase in quality of scientific products and the possibility for students and faculty to collaborate with research groups of proved scientific excellence. This will be certainly a very favorable setup to implement the new graduate program we have recently submitted.

2.8.2.1 Describe the policy governing how scholarships are distributed from the School's Programa de Aperfeiçoamento de Ensino (PAE) [Teaching Training Program].

R: Not applicable.

2.8.2.2 What is the relationship between demand for and availability of scholarships from the School's Teaching Improvement Program?

R: Not applicable.

2.8.2.3 Report dropout rates of the School's Graduate students in the last 5 years. Are there policies to avoid dropout in these Programs? Comment

R: Not applicable.

2.8.2.4 List the support services provided by the School to Graduate students (not considering those provided by the Central Administration).

R: At present, three staff members of the Research and Teaching Division manage all academic activities, as detailed above in the 'Undergraduate Education' section. They all provide support to graduate and undergraduate courses. One of those three employees will be exclusively dedicated to the new graduate program to be hosted in the unit. These new tasks will be carried out in tight collaboration with the coordinator of the program. Lab technicians support the courses.

2.8.2.5 What is the profile of Graduate Alumni expected by the School?

R: We intend with the new graduate program in 'Marine Biodiversity' to prepare highly qualified academics for different professional areas. Specially, we foresee opportunities in (i) institutions dedicated to environmental management, such as governmental secretaries at the different levels (county, state and federal levels), conservation units, enforcement agencies, risk assessment and environmental impact enterprises, (ii) aquaculture and the several different industries depending on the prospection of marine bioactive substances, and (iii) research and teaching institutions.

2.8.2.6 Are the subjects and teaching and learning processes implemented in the Graduate courses within the School consistent with this profile? Comment.

R: The courses already enrolled in our graduate program, as well as respective educational approaches, were conceived as to meet two main objectives; prepare students to independent scientific practice, and introduce substantial theoretical and practical knowledge on fundamental areas of Marine Biology. We consider such an academic experience equally important to professionals aiming a position in the university, or research institutions, as well as those seeking for job opportunities in other sectors.
At present, the program counts with no courses directly related to technological applications or entrepreneurism. Students may however seek for adequate training on these areas in graduate programs based at other USP units, or other state universities.

2.8.2.7 Does the School have any formal relationship with Graduate alumni? Is there any system within the School to track these alumni?

R: Not applicable.

2.8.2.8 Comment on the fields and areas of professional practice of the School's Graduate alumni (both in the academic and non-academic fields).

R: Not applicable.

2.8.2.9 Mention outstanding performances of the School's Graduate alumni.

R: Not applicable.

2.8.3.1 Is qualification to work in the Graduate Program taken into account when hiring new

faculty members? Comment.

R: Taking into account that the last two faculty joining the unit were selected out from 20 to 30 candidates, and that the interest for a new faculty position is increasing, one could consider virtually certain that next faculty members to be hired in the CEBIMar will be fully prepared to actively collaborate in graduate programs.
We intend that next faculty hires will supply academic expertise in the fields of Community Ecology and Management of Marine Protected Areas, which will certainly appeal several students and substantially strengthen the new graduate program to be implemented in the unit.

2.8.3.2 Indicate initiatives intended to strengthen the internationalization of the School's Graduate Programs.

R: The achievement of an international level of the Graduate Program in Marine Biodiversity will be a consequence of the international collaboration in research projects that spontaneously occurs in our institution. Presently, several courses are already co-taught in collaboration with international professors, as well as many students have already developed co-supervised thesis' projects. This practice is becoming more frequent and shall be expected to be an ordinary procedure in the new program.
As already mentioned, actions supporting international collaboration occur between CEBIMar and foreign research groups, although presently there is no specific collaborative MoUs at the institutional level. To date, this collaborative actions have been enough to place CEBIMar in important networks of international scientific cooperation. We believe that more comprehensive and formal MoUs will naturally be made with selected partner institutions, which could even result in double PhD diploma.

2.8.3.3 Indicate the School's projects and Programs collaborating with each other and/or with other Schools within USP and also with other public and private institutions.

R: Not applicable.

2.8.3.4 Are the School's Graduate Programs prepared to receive international students? What are the initiatives and difficulties faced?

R: The unit accepts several foreign students, inserted at different levels in the USP academic system, including those that are co-supervised by CEBIMar faculty, participating in courses as invited attendees and carrying out only a part of their projects, and regular students, living in São Sebastião and officially enrolled in one of the graduate programs counting with the collaboration of our faculty.
The new program on Marine Biodiversity to be created in the unit will very likely attract more foreign students. While students coming from Hispanic countries may tackle the Portuguese language relatively easier, others will find it more difficult. Although approving standard Portuguese proficiency tests as required, these students will hardly master the language by the end of their stays, when they will present the results of their theses' projects. However, several courses are already given in English, and faculty members are prepared to teach any contents in this language, if needed. There will be also no major impediments to undertake admission exams in English or Spanish, when necessary. Major challenges will be certainly not related to program rules or teaching activities, but probably to the bureaucracy required to obtain travelling visas and to the difficulties of arriving students to establish themselves in São Sebastião. Among other impediments, signing contracts for essential needs, such as mobile phone services, internet provision, and housing may be particularly troublesome and time-consuming for recently arrived students, since they usually lack documents certifying their addresses or taxpayer registration numbers, which are usually requested for these purposes. Although not strictly related to their academic life, we intend to provide students full assistance from a staff member of the Research and

Teaching Division to solve all these issues.

2.8.3.5 Does the School promote actions to encourage students to participate in supervised training programs in Brazil and abroad?

R: As commented above, most of the interchange involving CEBIMar academics originates on the initiatives of individual faculty members, making use of their networks. Because graduate students are so far linked to graduate programs based in other USP units, there is no influence of CEBIMar faculty on any institutional policies encouraging mobility.
As a common management practice for the program to be created in the unit, we intend, however, to stimulate mobility as a counterpart of faculty efforts. This can be achieved by either partially funding interchange missions, or by conceding credits for other expenses to faculty members actively seeking for external support.

2.8.3.6 Is there an incentive policy encouraging entrepreneurship in the School's Programs? Comment.

R: At present, the graduate education in the unit is not directly concerned with entrepreneurism. However, the Research and Teaching Division is alert to the demands of students, which may trigger changes of ongoing education policies. Particularly, the creation of the new program in Marine Biodiversity, may well drive the development of new technological applications based on marine bioprospecting, which is a major research line of the program.

Research

2.9.1.1 Outline the profile of the School's research activities, describing the main fields, groups and lines of research.

R: Most of the scientific production carried out at the CEBIMar is coordinated by its own faculty board, but there is also an important share of this production led by other USP faculty, whose projects require specific infrastructure and technical services. Overall, the scientific community in the unit is a diverse academic assemblage of faculty, post-docs, PhD and MSc students, undergraduate students (scientific initiation) and lab techs.
The main research lines of CEBIMar faculty are divided in (1) Ecology, (2) Evolution, Systematics and Biogeography, and (3) Natural History and Developmental Biology. In the main area of Ecology, the most important research lines are (i) ecology of marine phytoplankton, (ii) bio-optical oceanography, (iii) ecology of marine invertebrate larvae, (iv) ecology of rocky shores, and (v) population ecology of decapod crustaceans. In Evolution, Systematics and Biogeography, research lines include (i) marine evolution, (ii) systematics and biology of hydrozoans, and (iii) systematics and biology of gelatinous plankton. Finally, research in Natural History and Developmental Biology is focused on (i) biology of echinoderms and (ii) developmental biology of crustaceans.
Over the period this report is concerned, scientific projects to which the CEBIMar concedes specific infrastructure and technical services (and therefore deserves the status of second affiliation in any publications resulting from them), were coordinated by one faculty at the Institute of Biosciences, one faculty at the Oceanographic Institute and another one at the Institute of Biomedical Sciences. These are projects on the (4) Reproductive Physiology of Fish, (5) Zooplankton Biology, and (6) Biology and Physiology of Marine Micro-Organisms, respectively.

2.9.1.2 Highlight from three to five research activities that best represent your School. Comment on the relative impact of three to five main research products (e.g. manuscripts,

patents, and public policies) from the School in the period.

R: 1) Research Group on Marine Biodiversity (NP-BioMar) - This is probably the most relevant research activity over the period, stimulating multidisciplinary science in Marine Biodiversity within the USP and the submission of a graduate program based at the CEBIMar
2) Thematic FAPESP project: Dimensions of marine life: patterns and processes of diversification in planktonic and benthic cnidarians
3) Thematic FAPESP project: Biodiversity and functioning of a coastal subtropical ecosystem: subsidies for an integrative management
These are two important projects, in representative research areas of the unit. The purpose of the first is to understand the evolutionary mechanisms of diversification in a specially relevant invertebrate group. The second aims a better understanding of ecological processes regulating a unique estuarine ecosystem. It also constitutes an effort to preserve an area threatened by a project of port expansion.
4) Regular FAPESP project: Collaborative analysis of the modes of Brazilian coastal oceanographic variability using the 'sistema de monitoramento da costa brasileira' (SIMCOSTA).
5) Regular FAPESP project: A comparative study on the role of bottom-up control on the recruitment of marine invertebrates between temperate and sub-tropical regions
These are two separate initiatives fostering the establishment of international collaboration partnerships. The first is a collaboration with the Dalhousie University to enable network monitoring of coastal oceanographic conditions, and the second is a partnership with the University of Southampton for the study of processes regulating the recruitment of marine invertebrates.
Products - Five scientific papers were selected as to represent the research undertaken at the unit. These contributions were published in relevant scientific journals in the area, and received distinguished attention of our peers.
1) Bricaud A, Ciotti AM, Gentili B (2012) Spatial-temporal variations in phytoplankton size and colored detrital matter absorption at global and regional scales, as derived from twelve years of SeaWiFS data (1998-2009). Global Biogeochem Cy 26: GB1010
2) Christofoletti RA, Murakami VA, Oliveira DN, Barreto RE, Flores, AAV (2010) Foraging by the omnivorous crab Pachygrapsus transversus affects the structure of assemblages on sub-tropical rocky shores. Mar Ecol Prog Ser 420: 125-134
3) Fehlauer-Ale KH, Mackie JA, Lim-Fong GE, , Ale E, Pie MR, Waeschenbach A (2014) Cryptic species in the cosmopolitan Bugula neritina complex (Bryozoa, Cheilostomata). Zool Scr 43: 193-205
4) Kitahara MV, Stolarski J, Cairns SD, Benzoni F, Stake JL, Miller DJ (2012) The first modern solitary Agariciidae (Anthozoa, Scleractinia) revealed by molecular and microstructural analysis. Invertebr Syst 26: 303-315
5) Netto SA, Fonseca G, Gallucci F (2010) Effects of drill cuttings discharge on meiofauna communities of a shelf break site in the southwest Atlantic. Environ Monit Assess 167: 49-63

2.9.1.3 Describe the development of scientific and technological production in the School in the last 5 years (papers, books, patents, curatorship, and expositions, etc.).

R: As in many other fields, scientific production in Marine Biology is best assessed by examining the quantity and quality of papers published in indexed journals. By searching the Scopus and the Web of Science databases, specifying the authors' address, an evident exponential increase of scientific productivity was observed from the beginning of such records in 1983 to present. The five years from 2010 to 2014 are the ones when the highest number of papers were published, ranging from 19 to 37 (Scopus) and 11 to 26 (ISI). The maximum annual production occurred in 2014 for both databases, indicating an ongoing increasing trend.
It is important to point out that the distribution of this scientific production in the research lines described above has changed considerably over time. An overview of the publication record of ISI papers, considering the whole time series (from 1980 to present), suggests 4 different periods. From 1980 to 1994, 90% of all papers correspond to contributions in 'Natural History and Developmental Biology' (NHDB). Over this period, there was a very important contribution in the physiology of marine organisms,

chiefly osmorregulation, biological cycles and reproductive physiology. In a second period, from 1995 to 2004, the share of papers in NHBD, although still the most important (58%), had ceased space to contributions on 'Evolution, Systematics and Biogeography' (ESB, 37%), while publications in 'Ecology' (ECO) remained very scant, comprising only 5% of the whole production. In the third period, corresponding to the 2005-2009 quinquennium, the distribution of scientific production among domains became more even. ESB became prevalent (59%), followed by NHDB (27%). Still the least representative research line, the production on ECO gained relevance (14%) during this third period, and occupied the first position during the period examined in this report (2010-2014). The contributions on the other areas were 40% and 13% for ESB and NHDB, respectively. Considering this trend, it is likely that the scientific production in the unit will remain fairly balanced and diverse.
The presentation of papers in scientific meetings and the publication of books, and book chapters, are also important indicators of production in the unit. Faculty and post-docs affiliated to the CEBIMar are responsible for the authorship of 35 presentations in international meetings and 35 presentations in national ones. They also authored, or co-authored, 1 book and 27 book chapters during the period (2010-2014). More detailed information on CEBIMar's production can be retrieved at http://cebimar.usp.br/index.php/pt/menupesquisa/atividades-e-producao/dados-plataforma-lattes.html. Exhibits and the management of collections are regarded herein as outreach activities.

2.9.1.4 What are the indicators used by the School to assess the relevance of scientific and technological production (number of citations received in ISI, SCImago, Scopus, impact of periodicals and others, deposited and licensed patents)? Describe the development of the main indicators in this period.

R: The main indicators of scientific productivity in the unit are related to the quantity and quality of published papers. Bearing in mind there are no perfect indicators, the number of citations is widely recognized as valuable parameter reflecting the relevance of any scientific document. In the case of recent publications, to which is still difficult to determinate their real influence, the impact factor of journals where they were published is used as an estimate of their future importance.
Again restricted to ISI papers, a detailed analyses of all published contributions in the period showed an increase of productivity based on the number of published papers, not on their quality. While the number of papers published increased steadily from 11 in 2010 to 26 in 2014, the impact factor of these documents oscillated without a clear trend around an average of 1.81, with a minimum in 2011 (1.41) and a maximum in 2010 (1.99). Therefore, the overall impact of the unit's production increased steadily from 21.9 to 49.3, summin 161.2 over the period. Considering that the total number of citations to CEBIMAr's papers in 2014 was 214 (the highest annual value recorded so far), such an additional impact may represent an important quantitative leap.
The challenge of the unit for the coming years is to prioritize the quality of our bibliographic production. Although quite satisfactory, corresponding to a Qualis A2 grade using CAPES criteria, the average impact factor of publications remained stable, not following the improving trends of a number of other parameters. The activities of the Research Centre for Marine Biodiversity, as well as the functioning of the new graduate program to be initiated in the unit, should exert a very positive effect on this issue.

2.9.1.5 Describe the development of scientific papers published in the period by the School with the collaboration of International Universities. What is the percentage of these papers in relation to the total number published by the School?

R: Following the approach above, this trend can be better appraised if the whole historic series is taken into account, that is, since 1980. In this case, however, we grouped records in 5-yr intervals. The percentage of papers co-authored by researchers affiliated to foreign institutions showed an initial gradual increase from 0% in 1980-1984 to 18% in 1995-1999. Over the following 10 years, this share rapidly raised, reaching 41% in 2000-2004 and 66% in 2005-2009. Regarding the 5-yr period examined in this report, the percentage of papers with the participation of colleagues from foreign universities was 54%. If

analyzes in a yearly basis, these numbers oscillated from 35% (2011) to 63% (2012), without a clear trend over the period.
Taken alone, these numbers suggest that scientific collaboration with foreign researchers has reached a plateau, around 40 to 60%, but there are reasons to predict a further increase of international collaboration in these terms. The creation of a graduate program based at the CEBIMar, partially supported by a rich international collaboration network, as well as enduring investment on international missions and projects by national (e.g. CNPq Science without Borders) and state (e.g. FAPESP calls for bilateral missions, student mobility through BEPE) funding agencies will probably raise these numbers.

2.9.1.6 What is the School's scientific policy?

R: The mission of the CEBIMar in research is to 'undertake scientific and technological research on the different domains of marine biology and marine science, in general'. In this sense, the scientific policy of the unit is to create the necessary conditions to strengthen established research lines and to seek ways to implement new scientific fronts in areas still under-represented. This is a long-term objective, bearing in mind that the CEBIMar is still a developing unit. Hiring new faculty members with expressive activity in key areas is mostly needed to accomplish this mission.

2.9.2.1 Comment on the School's participation in research networks and academic projects (CEPIDs, INCTs, Thematic Research Groups, Pronex, and CNPq's Integrated Projects, PADCT's Projects, FINEP, etc.) and the School's interaction with public and private sectors.

R: As mentioned above, there is ongoing participation of CEBIMar faculty members in two large FAPESP thematic projects. One of those is actually coordinated by one of our faculty. In the other, a CEBIMar faculty is one of the principal investigators. The participation of CEBIMar faculty was also essential for the preparation of one of the USP subprojects which were submitted and approved in the public call MCTI/FINEP/CT-INFRA-2013. This subproject, entitled 'Making deep-sea research feasible - A remote operating vehicle (ROV) to the USP', had a recommended budget of R$ 2.688.00,000, which will allow sampling the water column and the benthic environment up to a depth of 1,500 m; an impossible task using the equipment available today in the university.
Our participation in such large initiatives has stimulated the interaction of the unit with other sectors, mainly those related to coastal management and environmental protection. The CEBIMar, as well as its partner institutions, has widely disseminated several results obtained through these large proposals, including mass media with national impact. This way, the unit has often interacted with the public ministry and with different governmental, and non-governmental, organizations involved in environmental policy.

2.9.2.2 Provide information on the Centers linked to the School. What is their contribution to the School's academic development?

R: CEBIMar is the host of the Research Centre of Marine Biodiversity, and its contribution to the academic development of the unit is of paramount importance. Its mission is described in six different topics (http://npbiomar.cebimar.usp.br/index.php/pt/sobre-o-np-biomar), of which three are directly related to such contribution:
1. Define strategies to achieve significant scientific advance in fundamental research, with emphasis on evolution, ecology, bio and phylogeography and conservation. Create a favorable academic environment to spark the production of multidisciplinary science, avoiding the fragmentation of knowledge;
2. Qualify the CEBIMar / USP to meet novel demands: create new laboratory infrastructure to enable research on bioprospection in the unit and new facilities for meetings of research groups, seminars and workshops;
3. Seek free-transit of students and professional researchers through laboratories and other working spaces, stimulate the co-advisory of graduate research by faculty with contrasting scientific background,

and implement a seminar programme as part of regular curricula.
As explained above, this commitment led, among other initiatives, to the submission of a new graduate program, which represents itself an important advance in each of these issues.

2.9.2.3 What is the School's fundraising policy? What are the indicators to measure success?

R: The resources available in the unit for were mostly obtained through research proposals submitted to the main agencies that support research in São Paulo State - FAPESP and CNPq - in different funding lines. Examples include thematic projects, regular research grants, bilateral collaboration missions, visiting scientist grants, mobility for short research stays, support for publication expenses, scientific productivity grants, etc. Although still responding for a smaller share of resources, international granting agencies benefit CEBIMar academics in different ways. Direct funding is conceded by agencies of very different kind, such as the National Geographic Society (scientific expeditions) and Aquaculture Network of Quebec (mobility). Indirect support has been also received from the collaboration of faculty in projects granted by international agencies (e.g. NSF - USA; FCT - Portugal).
Undoubtedly, the total amount of granted funds is a clear parameter of success, mostly because they are usually obtained from funding lines prone to intensive competition, and make possible broader research projects. Also, efforts to diversify funding sources are encouraged since they indicate capacity to identify specific favorable opportunities. One example of such opportunities are the calls publicized directly by the Ministry of Environment for the establishment of scientific agreements, which led to expressive investment in the unit over the last five years.

2.9.2.4 What is the School's policy regarding support of core activities (publishing books or chapters, papers, patents, other research publications and the creation of public policies)?

R: Because the CEBIMar is a very small unit for USP standards, there is no specific sector responsible for the production of bibliographic materials or other medias. Faculty publishing scientific materials other than journal articles have obtained relative success in their funding requests to external funding bodies. In some cases, the USP itself, namely the Outreach Office, had supported the production of diverse materials.

2.9.2.5 Provide information on the number and describe the development of post-doctoral and young researchers supported by funding agencies in the period? Comment on the development in regard to the previous period.

R: For several years, the CEBIMar has been the USP unit with the highest number of post-docs (PDs) per faculty member. Yet, there are still reasons to expect that an increase of these numbers. From 2010 to 2014, the number of PDs increased considerably. In 2011 and 2012, there were 4 PDs affiliated to the CEBIMar and this number raised during the rest of the period; specifically 7, 8 and 10 PDs in 2012, 2013 and 2014, respectively.
Over these 5 years, two FAPESP Young Research Fellows (YRFs) finished their projects in the unit, with no further left at present. As for PDs, there is a strong will to support more YRF projects, but infrastructure had become limited, both in terms of office and lab space. There is the expectation to build a new laboratory to be partially financed with resources granted to the Research Centre of Marine Biodiversity. The executive project for this laboratory is almost finished but supplementary funds for its building are still lacking.

2.9.2.6 Analyze the School's post-doctoral activities, or the perspective on implementing it, as

well as the impact of post-doctoral scientific publications.

R: The academic activity of post-docs (PDs) is of most importance for the unit. Of all ISI papers published during the period covered in this report, 64% are authored by PDs, 61% of them (or 39% of the total) as first authors.
The CEBIMar PD program is one of the strongest scientific initiatives in the unit. Brazilians or foreign, PDs attracted by the CEBIMar are world-class researchers. Once in the unit, these young scientists rapidly interact with the local academic community. As a rule, PDs collaborations go beyond their relationship with supervisors, and include the advisory (or co-advisory) of students of different levels. This environment has proved to be ideal for the continuation of their research, from data collection to publication.
A surprising fact is that all past PDs, or JPs, are today professionals on their fields of expertise. In their vast majority at universities hosting intense scientific activity.

2.9.2.7 In addition to research activities, does the School have policies to include post-doctoral and young researchers in Undergraduate and Graduate teaching activities? Comment on the impact of these activities in the post-doctoral scientific publications.

R: CEBIMar post-docs collaborate routinely in optional undergraduate courses of the unit, and graduate courses of other units, but offered by CEBIMar faculty. This experience has proved to be extremely valuable for these young researchers when competing for academic positions, since teaching skills are always required and evaluated.

2.9.2.8 Indicate the main scientific meetings organized by the School.

R: The CEBIMar hosts a diversity of national and international workshops, organized by other institutions, but CEBIMar academics also organize their own scientific meetings. The "Symposia of Marine Biology" are the most important ones. The series began in 1975 and endured regularly until 2003, summing up 28 editions. In 2014, efforts were made to reactive the symposia, and the next edition (29st) will take in November this year, as part of the celebrations of the 60th anniversary of the institution.
The CEBIMar also organizes informal scientific meetings, every other week, which aim the discussion of novel ideas, a critical reading of particularly relevant work, the presentation of scientific results of our academics, etc. These are the meetings 'Café com Ciência' and the 'Cebimários', detailed in other sections of this document.

2.9.2.9 Is there any initiative to improve and expand the School's Scientific Training for Undergraduate Students.

R: As commented in other sections, the CEBIMar does not offer a graduate course. Graduate students which attend CEBIMar optional courses do not live in São Sebastião. This scenario is not favorable for the expansion of the program in the unit. Over the last years, the CEBIMar has been awarded 1 to 2 scientific initiation fellowships. Selected students come either from local institutions, of from other places, as São Paulo, in exceptional circumstances, lasting 1 or 2 semesters, when there are only very few other courses to attend at their host unit, allowing students to stay away for longer. Given this present situation it is not possible to improve the program in São Sebastião.

Culture and extension

2.10.1.1 What is the School's Culture and Extension policy?

R: The CEBIMar holds an historic and important record of outreach activities, mostly oriented to scientific dissemination and environmental education, which justified specific regulation in the statute of the unit. Hiring a full-time educator to coordinate such activities demonstrates the will and the tendency of the unit to invest in outreach and to make science more popular.
The CEBIMar is located in the northern coast of São Paulo State , where academic outreach initiatives are scant. Therefore, over the last few years, the CEBIMar has been strengthening its links to the local population by establishing a program of monitored visitation, producing dissemination materials (printed folders, contents of different nature available in the internet, such as photographs, videos, texts, games, etc.), organizing presential and virtual exhibits, assisting different institutions for the defense and protection enforcement of protected areas, and supporting primary an high-school students which use our library and explore our institutional website, and frequently bring their questions personally or via e-mail. The intensification of such activities led the CEBIMar to become quite familiar among the local, non-academic public, which is now viewed as the most traditional and one of the most important academic institutions in the region.
The unit has participated in great part of the initiatives promoted by the USP outreach office, gradually increasing its presence in important programs such as 'The University and Professions', 'The Art and Culture Week', 'The USP and the Elderly', 'USP Legal' and 'USP Convive'. Also, the CEBIMar has offered outreach courses (in the so-called 'dissemination modality') since 1985, which aimed undergraduate and graduate students provided backgrounds in Biology, or other areas, but aiming specific education in Marine Biology. These courses are offered non-stop, providing a unique experience to participants which closely follow scientific research through theoretical and field classes.
Outreach courses or projects, either coordinated by CEBIMar staff or by visiting academics, are initially submitted to the Deliberative Board for their evaluation of merit, feasibility and approval, when successful.

2.10.1.2 Describe the main activities of the School's Culture and Extension programs and projects and how these have developed in the last 5 years.

R: a) The Program of Monitored Visits of the CEBIMar: This is an ongoing program for 30 years, which has been recently upgraded, now counting with an increased infrastructure and exclusive human resources. Thereby, the number of visitors increased from 200 to 1,000 people a year.
b) Institutional website: The unit disseminates its activities by publicizing texts and multimedia materials at http://www.usp.br/cbm, as well as other linked sites, such as the Marine Biology Databases - 'Cifonauta'(http://cifonauta.cebimar.usp.br/), which makes available images resulting from CEBIMar's bases activities. From its launch, in September 2011, the Cifonauta is consulted by over 120 thousand users, which made so far up to 600 thousand page visualizations.
c) The scientific exhibit 'Vida, mar e muita história pra contar: the origin of biodiversity in the oceans' was conceived with the objective of portraying the origin and diversification of life in the oceans by means of printed materials and interactive objects under the supervision of monitors. All these contents can be accessed at http://www.usp.br/cbm/expovida/, with versions in English and Portuguese. From its beginning, the exhibit was set up in ten occasions (5 counties in 3 different states) and 75 thousand peopled had attended the exhibit.
d) The Science Club: This is a result of a partnership between the CEBIMar and a local county school created in 2013. The objective of the Science Club is to introduce the Scientific Method to students in a simplified way, encouraging the interactive participation of students in their own projects. Students joining the club may also be eligible for scientific initiation fellowships, such as the ones granted by CNPq (Junior Scientific Initiation Program).
e) Beach Cleanup Task Force: Each year, the CEBIMar participates of the 'World Cleanup Day of Rivers and Beaches' organized by the NGO 'The Ocean Conservancy'. The aim of this event is to aware the population of environmental problems. The quantity and type of residuals washed ashore is recorded, providing a subsidy for planning policies and actions toward the mitigation of this problem.

f) Professional orientation. The CEBIMar offers professional orientation to high-school students each year, not only as part of the monitored visits' program, but also aligned to other USP initiatives such as 'The University and Professions' and 'The Professions Fair', both promoted by the USP Outreach Office.
g) The library at the CEBIMar serves the internal and external academic community, including high-school and university students from the São Sebastião area, which benefit from a specialized collection of ca. 4,475 books, 620 theses, 19,245 journal issues, 6,983 reprints, 1,066 other printed materials, besides other sources produced by the CEBIMar. Remote service by means or search engines of internet databases, or reply to users' e-mail messages, benefits an additional group of users.

2.10.1.3 Does the School use indicators to assess the Culture and Extension activities?

R: Visitors are asked to fill out questionnaire forms. Responses related to didactic approaches, contents, and environmental awareness are organized in spreadsheets and used as indicators of issues needing improvement. In addition, the number of people (as well as their location) visiting the internet sites managed by the CEBIMar is closely followed.
In the case of course participants, the forms created by the USP Outreach Office are used for evaluation. Besides the pedagogic point of view, these forms also ask for inputs on services and infrastructure. These data are used to detect bottlenecks and thus locate additional effort and resources to sectors interacting in the different interfaces of culture and outreach.
The demand for our outreach courses indicates the quality of proposals and contents offered to the communities internal or external to the USP. The number of students that register to these courses reflects general acceptance, and that contents matched students' expectations.
Also, the number of students requiring training stays in the CEBIMar, during vacations or not, indicate that activities taking place at the unit are attractive and may elicit a professional choice for any area related to Marine Biology.

2.10.1.4 Indicate the impact of the Culture and Extension activities performed within the School in terms of effective or potential benefits.

R: The CEBIMar has traditionally aimed to arouse the interest for marine biology in students, academic professionals and the general public. Also, we aim to disseminate scientific practice and aware people of the serious environmental problems we face in the region. Although there are still relatively well preserved terrestrial and marine ecosystems, the northern coastal region of São Paulo State is threatened by a number of environmental stressors, such as real estate speculation, harbor activity, fisheries, etc. The CEBIMar and the Ubatuba station of the USP Institute of Oceanography are the only public institutions based in the region that might assist management policies.
As examples, the Program of Monitored Visits and the Science Club project are outreach activities that spark the interest of youngsters to marine science, aware them of socio-environmental threats affecting the region, and encourage a critical attitude when facing such problems. At school, these students almost lack extracurricular activities promoting such engagement and the CEBIMar plays this role almost exclusively in the region.

2.10.1.5 Does the School have a policy designed to encourage valuing culture and extension activities in considering the faculty's activities? Comment.

R: As the single USP representative in the northern coast of São Paulo State, the CEBIMar is a key player in the process of public awareness in the region. Their faculty have been increasingly involved in educational, cultural and scientific activities strengthening the relationships between the USP and the society.

2.10.2.1 Report the main professional training and continuous education activities, the number of issues and participants (report amounts in the context of fundraising):

a) Specialization Courses

R: Not applicable.

b) Training Courses

R: Not applicable.

c) Updating Courses

R: Not applicable.

d) Residence Activity

R: Not applicable.

e) Vocational Practice

R: Not applicable.

2.10.2.2 What is the importance of and what are the consequences/impact of the School's participation in advising, consulting, and the delivery of specialized services to public and private institutions, scientific entities and other organizations in society? List the agreements and contracts managed by the School in recent years (with scope, timing and amount).

R: CEBIMar faculty are representatives of several organizations and initiatives committed to environmental protection and conservation in the northern coast of São Paulo State. Representation in the advisory council of the State Park of Serra do Mar (São Sebastião unit) allows the CEBIMar to directly assist decision makers in their management of protected areas (PAs).
Also, representation in the work group responsible for the advice on enterprise licensing (WG - Licensing), allow the unit an active voice in the analysis of environmental impacts resulting from the implementation of infrastructure, including roads, that might affect PAs.
Activities aligned to the advisory council of the Tupinambás Ecological Sation and in its own GT-Licensing, enable the management of this PA and an analysis of environmental impacts resulting from major interventions, such as the installation of the offshore infrastructure needed for the exploitation of fossil fuels deposited in the pre-salt layer, among others.
The CEBIMar also participates in the management council of marine protected areas in the northern coast of São Paulo State, contributing to the management of PAs, and to the assessment of impacts resulting, for instance, from the expansion of the São Sebastião Harbor. The contribution of the unit in this council is essential, since the CEBIMar itself is located in a special conservation unit (the São Sebastião ARIE; acronym of area of special ecological interest in Portuguese).
The CEBIMar also collaborates at other instances of public administration or work groups: 1) the São Sebastião Municipal Council of Environment and Urban Development (COMDURB; Secretary of Environment and Urban Development of São Sebastião); 2) the Coordinated Sector Group of Coastal

Management of the Northern Coast of São Paulo State; and 3) the Observatory's 'Sustainable Northern Coast' Dialogue Table (am agreement stemming from a partnership between the PETROBRAS and the Pólis Institute). This allows the CEBIMar to be heard in discussions on the licensing requirements for great enterprises and the planning of soil occupation, and also to closely follow the information flow and the activities predicted in the sustainable development agenda for the northern coast of São Paulo State.

2.10.2.3 What is the production of the School's faculty in regard to educational activities and dissemination of scientific, artistic, cultural, technical or technological knowledge, reporting the number of issues and participants:

a) Outreach Courses (e.g. workshops, lectures, etc.)

R: Dissemination courses are offered annually by CEBIMar faculty, usually full-time. These are essentially hands-on courses, with intensive laboratory and field activity. From 2010 to 2014, 15 different dissemination courses were given for a total of 144 participants.

b) Professional Continuing Education

R: Not applicable.

c) Projects directed to basic education

R: Not applicable.

d) Exhibitions and fairs

R: Scientific exhibit: "Vida, mar e muita história pra contar - the origin of biodiversity in the oceans" (2010 - 2013) (http://www.usp.br/cbm/expovida/).

e) Texts, teaching material or other products directed to the community.

R: 1) Updated news at the site "Notícias CEBIMar" (http://noticias.cebimar.usp.br/): 125 "news' clippings" (links to news related to Marine Biology announced in other sites); 151 CEBIMar news (news publicized by the CEBIMar; mostly broadcasting academic events, job or training opportunities, dissemination of particularly relevant scientific research, etc.); 3 papers on research projects supported or undertaken by CEBIMar staff.
2) Folders (available at http://cebimar.usp.br/index.php/pt/edicoes-do-cebimar.html):
- CEBIMar/USP: investigating marine life / Text: Alvaro E. Migotto; Cláudio G. Tiago; Valéria F. Hadel; Isabel Palumbo; Photos: Alvaro E. Migotto; Valéria F. Hadel; Joseilto M. de Oliveira. . São Sebastião, SP : CEBIMar/USP, 2007. Print run: 5,000 issues in 2010; 5,000 issues in 2011; 3,000 issues in 2012.
- Centre of Marine Biology of the University of São Paulo (CEBIMar/USP) / Text: Augusto Flores. Photos: Ana P.V. de Paiva, Alvaro Migotto, Luciano Abel and Clevison Batista. São Sebastião, SP : CEBIMar/USP, 2013. Print run: 10,000 issues in 2013.
- Plankton: tiny giants / Alvaro Esteves Migotto, Bruno C. Veluttini, Luciano D.S. Abel, Alberto Lindner. São Sebastião: CEBIMar/USP, 2013. 2 p. Print run: 10.000 issues in 2013.
- Animais Marinhos: prevenção de acidentes e primeiros cuidados/ Elaborado por Alvaro Esteves Migotto, Vidal Haddad Junior e Shirley Pacheco. São Sebastião: CEBIMar/USP, 2008. 2 p. Print run: 3,000 issues in 2012; 6,000 issues in 2013.

- Poisoning Marine Animals: Accident prevention and first aids/ Alvaro Esteves Migotto, Vidal Haddad Junior and Shirley Pacheco. 2nd. Ed. São Sebastião: CEBIMar/USP, 2015. 2 p. Print run: 6,000 issues in 2015.
3) websites:
- Cifonauta: Image database in Marine Biology (http://cifonauta.cebimar.usp.br/) - created by a CEBIMar faculty member and a graduate student, this database makes available a repository of over 10,000 images and videos, mostly produced during research and teaching activities undertaken at the CEBIMar. This material is available for free for non-commercial use.

2.10.2.4 What is the participation of Graduate and Undergraduate students in the School's extension programs?

R: The participation of students takes place at different levels, mostly collaborating in regular outreach activities.
Professions' fairs: Students always collaborate with non-faculty staff in the preparation of materials and in the fair itself while explaining to visitors the activities taking place at the CEBIMar, the profession of a Marine Biologist and job opportunities, as well as its similarities to a biologist and an oceanographer. During this annual fair, students also provide information of the unit, such as infrastructure for teaching, research and outreach.
CEBIMars: These are regular meetings taking place in the unit. The objective is to share results of research projects among CEBIMar academics, or invite visiting scientists to discuss important topics in marine biology. These are opportunities for everyone seeking for some feedback or advice at different stages of their research projects.
CEBIMar's Management and environmental education commission: This commission is linked to the major program 'USP recycles', based at the USP Direction of Environmental Education and Management. The objective is to discuss approaches for an effective management at the CEBIMar. Solutions are brought to the Directory Board for approval.

2.10.2.5 Report on the culture and extension centers linked to the School and their contribution to academic development.

R: Not applicable.

Internationalization

2.11.1 Analyze the internationalization of core activities and its impact on the School's performance in the last 5 years

R: Teaching and research at the CEBIMar are at present clearly inserted in an international context. The collaboration with institutions outside the country, as mentioned above, is a result of convergent interests in relevant areas relative to Marine Biology, which is leading to the production of relevant and original scientific knowledge. Because many of these joint scientific efforts are complemented by graduate teaching, shared by CEBIMar faculty and visiting scientists, students have the opportunity to discuss original contents with specialists of recognized international competency. Hence, research activity and the discussion of theory in classroom are two tasks of a single process. Regardless of the guidelines followed to intensify collaborative actions, this is the policy to be sustained while fostering the insertion of the unit in broader international networks.
Therefore, it can be concluded that the impact of international cooperation in academic activities is substantial and very positive, Details on these effects on the academic education of students are given in

the sections 'Research' and 'Graduate Education'.

2.11.2 Indicate and analyze the student, faculty and administrative modalities

R: Indirect improvement of conditions for scientific practice undeniably benefited CEBIMar academics. Making available a larger supply of consumables, technical services and equipment through a more diversified laboratorial network, international collaboration has benefited academics of the unit. However, the advantages of more frequent mobility of faculty and students are more important. Our experience has shown that the best conditions for intellectual activity, including data analyses and writing, take place during such interchange missions, either of CEBIMar's academics abroad or vice-versa.
The impact of international partnerships on administrative sectors of the unit is certainly less important. It is possible, however, that broader collaboration agreements approximating the directory boards of convened institutions will also involve interaction of technical and administrative staff, likely promoting their professional upgrading.

2.11.3 Identify the repercussions of international initiatives (workshops, missions, the involvement of students and professors in national and international scholarly exchanges, agreements).

R: The unfolding of such initiatives were detailed in other sections of this document, as, for instance, the intense mobility of students and faculty members in both directions, a large share of papers signed by both foreign and local academics (evidencing positive results of international partnerships), and collaboration in teaching, towards a unified graduate education of partner institutions.

2.11.4 Identify international strategies.

R: As discussed above, the collaboration actions that had projected so far the CEBIMar internationally took place at a lower level, mostly between laboratories coordinated by faculty members. However, it is already possible to envisage institutional initiatives that may strengthen ongoing collaboration, as well as open new opportunities for further cooperation. One of these would be to sign agreements between the CEBIMar and its main partners allowing the concession of academic degrees (mostly MSc and PhD) valid for the two convened institutions. This would be a natural evolution of the program in Marine Biodiversity to be started in the unit soon. The other would be to expand ongoing collaboration by signing inter-institutional scientific agreements allowing, for instance, to obtain alternative funding sources and facilitate the proposal of more interdisciplinary projects.

2.11.5 Identify the main management and infrastructure demands related to meeting the School's internalization strategies.

R: As in every policies leading to the expansion of academic activities, there is a strong demand for laboratory space and, moslty, for new faculty positions, as to cover scientific domains still lacking proper representation in the CEBIMar. Also, it is important to qualify technical and administrative staff for a better assistance of the foreign community hosted by the CEBIMar, starting with a more proficient use of the English language.

INSTITUTIONAL PLAN (GOALS AND ACTIONS)

Institutional Plan (Goals and Actions)

3.1.1 Relate and comment on the primary goals and actions proposed by the School for the medium and long terms (5 and 10 years) concerning:

a) Management;

R: Goals (G) and Actions (A)
G1 (5 years). Division of responsibilities between Administrative and Financial processes.
A1. Structuring procedures for administrative and financial areas; Training for procedures; Establishing interaction among administrative and financial processes.
G2 (5 years). Establishing procedures for cyclical processes such as shopping and periodic maintenance.
A2. Historical assessment and study of demands; Computerization of procedures.
G3 (5 years). Computerization of academic demands and connection with administrative and financial procedures.
A3. Survey of network actions involving academic activities; Simplification of procedures; Creation of a management system with periodic adjustment.
G4 (5 years). Restructuring of the internal regulations to promote efficiency.
A4. Articulate analysis and approval of the regiment proposal; Periodic follow up of relevance and efficiency of the new standards.

b) Infrastructure;

R: Goals (G) and Actions (A)
G1 (5 years). Increase in 20% of the area for core activities.
A1. Reorganization of spaces; Centralization of administrative services in one building, freeing other areas for core activities; Improvement of the seawater intake system for the laboratories; Improvement of the area destined for outreach activities and visiting groups; Development of executive projects for the new buildings on schedule (10-year period - eg laboratory; floating pier; academic building, library and visiting facilities).
G2 (10 years). Increase in 60% of the area for core activities.
A2. Construction of a research building, a floating pier, setting an academic area near CEBIMar's entrance.
G3 (10 years). Expansion of the area occupied by CEBIMar.
A3. Generate an academic project to support the desired area expansion; Seek partnerships to buy surrounding areas (e.g. environmental compensation mechanism, academic partnerships).
G4 (5 years). Adaptations for accessibility and sustainability of infrastructure.
A4. Carry out accessibility project to external areas and laboratories; Carry out sustainable waste (solid and liquid) management projects; Promote sewage treatment and the reuse of water.
G5 (10 years). Expand the dormitory facility.
A5. Transfer the auditorium to another building to allow the expansion of the dormitory facility (this will occur only after the construction of an Academic Building, next to the highway).
G6 (5 & 10 years) Improve the infrastructure for research and education with the acquisition of new equipment (e.g., confocal and scanning electron microscopes), vessels, monitoring data acquisition systems; improvement of the molecular laboratory, etc.
A6. Complete the project of infrastructure priorities related to research and teaching; Use of public and private funding opportunities for renewing the equipment pool.

c) Technical and administrative employees;

R: Goals (G) and Actions (A)
G1 (5 years). Proficiency in a foreign language.

A1. English language courses for employees.
G2 (5 years). Creation of job positions, mainly for surveillance, kitchen, maintenance, and laboratories.
A2. Propose alternatives for the management of the restaurant; take part in the centralized contracts established by the central offices of the University for the regular maintenance services (eg. cleaning and maintenance of green areas); establish a comprehensive patrimonial protection program; provide continuing training and education for technicians and the staff dedicated to the Graduate Program.
G3 (10 years). Graduate Program at full operation.
A3. Gradual structuring of the academic section to support the graduate program; Increase the staff dedicated to the Graduate Program and the work of employees through training and education.

d) Faculty;

R: Goals (G) and Actions (A)
G1 (5 & 10 years). Allocation of 10 new faculty positions (associate professor and full professor).
A1. Consolidate the graduate program; Establish new priorities for research and training of students; Request and justify the need for new faculty positions.
G2 (5 & 10 years). Reach 20% of the faculty positions with Full Professor level.
A2. Establish areas in need of leadership in research and teaching at USP and the country in general; justify the need for new faculty positions.

e) Teaching and learning processes;

R: Goals (G) and Actions (A)
G1 (5 years). Incorporate skills related to the use of advanced technologies such as confocal microscopy and acquisition of environmental data.
A1. Modernization plan for the pool of equipment; Periodical revision of the academic content and students' abilities.
G2 (5 years). Increase the number of courses offered in English, with the participation of foreign professors.
A2. Optimize research network and its resources to include training students; Identify expertise to be developed; integrate students with international collaborators.
G3 (10 years). Defining and structuring mandatory and basic courses for the Graduate program.
A3. Periodically evaluate the graduate program; differentiate courses that are structural and basic, expanding their teaching staff and offering them annually.
G4 (10 years). Offer distance-learning courses.
A4. Identify courses with practical content compatible with distance learning; Adjust infrastructure, plan and offer courses.

f) Student body;

R: Goals (G) and Actions (A)
G1 (5 & 10 years). We expect to have ~20 students (5y) and ~100 students (10y) at CEBIMar engaged in the Graduate Program and Undergraduate Internships.
A1. Establishment of the Graduate Program in Marine Biodiversity; Student recruitment; Improve physical and institutional infrastructure, including human resources.

g) Undergraduate Program;

R: Goals (G) and Actions (A)
G1 (5 years). Search curriculum integration and co-responsibility for courses with related Faculties.

A1. Analyze the historical collaboration of CEBIMar faculty with faculties of related institutions; Identify and remedy potential logistical shortcomings to discipline offering with these units.
G2 (10 years). With the increase in teaching staff, expand the portfolio of courses offered in 100% and train twice as many students.
A2. Following the increase in number of the faculty, identify the specific training demands related to the scientific research conducted at the institution.
G3 (10 anos). Achieving self-sufficiency for physical, logistical and human resourcesfor the Graduate Program in Marine Biodiversity.
A3. Related to incrementes of logistics, infrastructure and employment presented in their respective items.

h) Graduate Program;

R: Goals (G) and Actions (A)
G1 (5 years). Propose and implement the Graduate Program in Marine Biodiversity.
A1. Structure the program and submit it to the internal procedures of USP and CAPES; The program will attend current academic and educational demands.
G2 (10).Graduate 70 masters or doctors.
A2. Strengthening of the Graduate Program in Marine Biodiversity; Establishing process and metrics to monitor the progress of the students.
G3 (10). Offer 20 graduate courses in Marine Biodiversity Program and related programs.
A3. Recruit faculty to collaborate with the Graduate Program in Marine Biodiversity; Hire new lecturers; Strengthen collaboration with existing programs.

i) Research;

R: Goals (G) and actions (A)
G1 (10 years). Increase two-fold the number of lines of research.
A1. Related to the hiring of new teachers and implementation of the Graduate Program.
G2. (10 years). Increase in 150% in the number of publications produced in high-profile vehicles (first quartile of IF in the Web of Knowledge in their respective fields).
A2. Train support staff (project offices, technicians, etc.); Investing values from RTI- FAPESP for researchers according with performances in publication and funding; encourage the development of higher breeding projects (eg. FAPESP Thematic Projects).
G3 (10) Attract 15 post-doctoral fellows.
A3. Related to the hiring of new professors and increasing the physical infrastructure.

j) Culture and extension;

R: Goals (G) and Actions (A)
G1 (10 years). Double the number of outreach events and activities.
A1. Promote outreach actions related to the research conducted by the new faculty members and increase the physical area and infrastructure for these activities.
G2 (5 years). Renew the area devoted to exhibition and visiting activities.
A2. Related to the infrastructure and physical area increment.
G3 (10). Create four world-class courses.
A3. Related to the increase in physical area, including housing, and infrastructure.
G4 (5 years and 10 years). Actively participate in studies and proposals for São Paulo state marine conservation areas.
A4. Increase research in marine conservation, using physical and biological databases available; Have active members on local environmental councils; publicize priorities for marine conservation actions.

G5 (5 years). Expand and strengthen the Marine Biology Image Database - Cifonauta.
A5. Increase the number of collaborators of Cifonauta. Add texts of texts of interest to it broad audience.

k) Internalization.

R: Goals (M) and actions (A)
G1 (5 years & 10). Establish formal agreements for teaching and research activities with two leading institutions in the field of marine biology.
A1. Stimulate joint research; Strengthen training of students as well as stimulate co-supervision, Integrate projects at global scales.
G2 (5 years and 10 years). Receive at least five high-profile international researchers during sabbaticals. These researchers are expected to collaborate in the graduate program.
A2. Use the already established research network to identify researchers with high international profile; Stimulate students to participate on ongoing research projects coordinated by these researchers; Improve the infrastructure to allow for studies needing methodological complexity.

3.2 Explain the main indicators to be used for monitoring goals and actions proposed by the School.

R: - Built and renovated areas for core activities.
- Number of bidding processes / year
- Increase of technical equipment.
- Increase in the number of faculty members.
- Increase in the number of post-doctoral fellows
- Increase in the number of undergraduate students.
- Number of publications in peer-reviewed international journals
- Annual impact factor of the articles published.
- Number of citations of all papers published.
- Number of citations by faculty member and article.
- Number of publications supported by CEBIMar.
- Number of publications by Project supported by CEBIMar.
- Number of outreach activities
- Number of persons reached by outreach activities.
- Number of mentions in the media (press, internet, radio, TV).
- Amount of money raised by faculty members projects.

OTHER COMMENTS

OTHER COMMENTS (if any)

R: Just a suggestion: The form could be improved, excluding redundant questions/subjects. Maybe the form could the structured in two sections - one merely quantitative, like filling a pre-formatted table, and the other including only the most important topics to be highlighted/explained.