

ESTADO FINAL RESOLUCION DEL CONSEJO Observaciones: _____ _____	FECHA <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>				<table border="1" style="width: 100%; height: 80px; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%;"></td> </tr> </table> <div style="font-size: small;"> 1. APROBADO 2. PENDIENTE 3. RECHAZADO 4. A FISCALIA </div>		

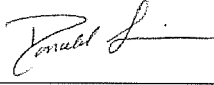
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EVALUATION REPORT CENTERS FOR ADVANCED RESEARCH

I. PROJECT INFORMATION

CENTER'S NAME Center for Oceanographic Research in the Eastern South Pacific
DIRECTOR Carina B. Lange

II. EVALUATION PANEL

NAME	ORGANIZATION/ INSTITUTION	E-MAIL	SIGNATURE
Donald Scavia	University of Michigan	scavia@umich.edu	

III. PROGRAMS EVALUATION (please fill up as many forms as programs exist within the Center)

PROGRAM'S NAME

Circulation and mixing in the ESP Ocean

PRINCIPAL INVESTIGATOR

Wolfgang Schneider

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center		X		
Diffusion of the results			See note in summary	

PROGRAM'S NAME

Microbial Communities and water column biogeochemical cycling

PRINCIPAL INVESTIGATOR

Osvaldo Ulloa

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results	X			

* If there had been none, please disregard this question

III. PROGRAMS EVALUATION (please fill up as many forms as programs exist within the Center)

PROGRAM'S NAME

Plankton Dynamics and its role in carbon cycling in the ESP

PRINCIPAL INVESTIGATOR

Ruben Escribano

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results			See note in summary	

PROGRAM'S NAME

Pelagic-benthic coupling in the ESP

PRINCIPAL INVESTIGATOR

Huberto Gonzalez

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results			See note in summary	

* If there had been none, please disregard this question

III. PROGRAMS EVALUATION (please fill up as many forms as programs exist within the Center)

PROGRAM'S NAME Community structure, metabolism, and biogeochemistry in the benthic realm
PRINCIPAL INVESTIGATOR Renato Quinones

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results			See note in summary	

PROGRAM'S NAME Paleo-studies in the ESP
PRINCIPAL INVESTIGATOR Silvo Pantoja

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results			See note in summary	

* If there had been none, please disregard this question

IV. CENTER EVALUATION

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Uso Interno
Degree of adoption of suggestions from the last report *		X		
Accomplishment of objectives and goals of the Center	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration between the programs of the Center	X	X		
Creation and reinforcement of international networks	X			
Outreach	X			
Diffusion of results	X			
Establishment and tasks of the Advisory Committee		X		

RECOMMENDATIONS (see following concepts)					
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APPROVE	APPROVAL WITH SUGGESTIONS	ADDITIONAL INFO.	PENDING	REJECT	FONDECYT USE
<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px;"></div> </div> <p style="margin-top: 5px;">May 30, 2009</p>					
Evaluation Date			Signature reviewer		

EVALUATION COMMENTS:

General: This is a very strong program and the annual report is comprehensive and thorough. The investigations are making significant contributions to the understanding of the physics, ecology, and biogeochemistry of the Eastern South Pacific Ocean, in general, and to some of the key issues concerning management and interaction with society.

The Center is meeting or exceeding all of the stated goals and is making good progress in engaging with the international community. It has created a strong External Advisory Panel, but unfortunately has not met recently. I recommend this be done as soon as possible and that the Center respond to their recommendations as appropriate.

The publication rate is very good, but I have one caution. The current list of publications shows about 25% being in the special issues and there are plans for an additional special issue. Special issues of peer-reviewed journals are a very good way to bring together the collective results of these multidisciplinary studies. While these are, in fact, contributions to the peer-reviewed literature, special issues are often perceived as “special cases” of peer review and not necessarily as rigorous as the regular journal issues. So, you would not want to expand beyond about 25% being published that way.

Responses to previous review: The Center has done a very good job in responding to most of the recommendations from the last review.

However, I do not see much progress in the development and integration of the oceanographic modeling effort to date. It may be because Dr. Tapia has only recently joined the Center, but I don't much involvement yet. Also, it is not clear if Dr. Tapia is a physical modeler or an ecosystem modeler (no CV was included). The center needs a strong ecosystem modeler to help integrate across the 6 strong research themes. This is not evident in the results described in this annual report. In the individual reports there are descriptions of how they interact with each other, but after 7 years I would have expected more synthesis work being done and reported.

There has been great progress in Outreach and Diffusion of Results; however, it is not clear how much the PIs are involved in this. While each individual report included an impressive array of scientific publications, it is not clear how else they diffuse the new knowledge. Very few of them mentioned these efforts in their individual reports.

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EVALUATION REPORT CENTERS FOR ADVANCED RESEARCH

I. PROJECT INFORMATION

CENTER'S NAME

Center for Oceanographic Research in the eastern Pacific Ocean (COPAS)

DIRECTOR

Dr. Carina Lange

II. EVALUATION PANEL

NAME	ORGANIZATION/ INSTITUTION	E-MAIL	SIGNATURE
Lawrence M. Mayer	University of Maine	Lmayer@maine.edu	

III. PROGRAMS EVALUATION (please fill up as many forms as programs exist within the Center)

PROGRAM'S NAME: RP1

Circulation and Mixing in the eastern South Pacific Ocean

PRINCIPAL INVESTIGATOR

Wolfgang Schneider

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center		X		
Diffusion of the results	X			

PROGRAM'S NAME: RP2

Microbial Communities and Water-Column Biogeochemical Cycling

PRINCIPAL INVESTIGATOR

Osvaldo Ulloa

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center		X		
Diffusion of the results	X			

- If there had been none, please disregard this question

PROGRAM'S NAME: RP3
Plankton dynamics and its role in carbon cycling in the eastern South Pacific
PRINCIPAL INVESTIGATOR
Ruben Escribano

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X	X		
Degree of integration with other ongoing programs of the Center	X	X		
Diffusion of the results	X			

PROGRAM'S NAME : RP4				
Pelagic-Benthic coupling in the eastern South Pacific				
PRINCIPAL INVESTIGATOR				
Humberto Gonzalez				
ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center		X		
Diffusion of the results				

* If there had been none, please disregard this question

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PROGRAM'S NAME: RP5
Community structure, metabolism, & biogeochemistry in the benthic realm of ESP
PRINCIPAL INVESTIGATOR
Renato Quiñones

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of the results reached regarding the objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center		X		
Diffusion of the results	X			

PROGRAM'S NAME: RP6
Paleo-studies in the ESP: A joint geochemical and paleobiological approach
PRINCIPAL INVESTIGATOR
Silvio Pantoja

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Internal use
Degree of adoption of suggestions from the last report *				
Accomplishment of objectives and goals of the reported program	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration with other ongoing programs of the Center	X			
Diffusion of the results	X			

* If there had been none, please disregard this question

IV. CENTER EVALUATION

ITEM	Total/ Good	Partial/ Regular	Insufficient/ Deficient	Uso Interno
Degree of adoption of suggestions from the last report *	X			
Accomplishment of objectives and goals of the Center	X			
Quantity of reached outcomes related to proposal objectives and goals	X			
Quality of reached outcomes related to proposal objectives and goals	X			
Degree of integration between the programs of the Center		X		
Creation and reinforcement of international networks	X			
Outreach	X			
Diffusion of results	X			
Establishment and tasks of the Advisory Committee		X		

RECOMMENDATIONS (see following concepts)						
X	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>APPROVE WITH SUGGESTIONS</small>	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>APPROVAL</small>	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>ADDITIONAL INFO.</small>	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>PENDING</small>	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>REJECT</small>	<input style="width: 40px; height: 40px;" type="checkbox"/> <small>FONDECYT USE</small>
<div style="display: flex; justify-content: center; align-items: center; gap: 20px;"> <div style="border: 1px solid black; width: 30px; height: 20px; display: flex; align-items: center; justify-content: center;"> <div style="width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 10px; height: 10px; border: 1px solid black;"></div> </div> <div style="border-bottom: 1px solid black; width: 150px; flex-grow: 1;"></div> </div>						
<div style="display: flex; justify-content: space-between;"> 8 May 2009 Evaluation Date Signature reviewer </div>						
<p>For suggestions please see Evaluation Comments</p> <p style="margin-left: 40px;">Approval with suggestions</p>						

EVALUATION CONCEPTS ANNUAL REPORT

1. **Approve:** The reviewer recommends to accept the report in its present form since he/she considers objectives and goals fully accomplished and all relevant issues covered by the report.
2. **Approval with suggestions or minor observations**
 - 2.1 **Minor observations:** The reviewer recommends the approval of the report despite the justified incompleteness of some aspects that does not constitute an obstacle for the continuity of the Center activities.
 - 2.2 **Suggestions:** The reviewer recommends minor changes in order to improve the future performance of the Center.
3. **Additional information:** The reviewer requires additional documentation or specific explanations to fully evaluate the report.
4. **Pending:** The reviewer makes significant observations to the report and conditions its approval to the accomplishment of specific demands.
5. **Reject:** The reviewer has strong objections to the contents of the report.

EVALUATION COMMENTS:

The core programs of COPAS, such as the cruise series, continue to be maintained. There is progress on new initiatives; the modeler hired last year is integrating with COPAS objectives, construction on the new building is due to begin in June, 2009, and the new emphasis in the southern fjords seems to be starting well with several research, educational, and outreach activities. The latter thrust will presumably receive a separate and more intensive review from the Basal program.

Publication activity continues to be strong, and well above baseline levels. Papers again range from descriptions of local phenomena (e.g., new local species and their characteristics) to regional syntheses to participation in more global contexts. The latter activity in this year appears more in participation in international organization rather than publications. The publication of the *Deep-Sea Research-II* volume builds on last year's issue of *Progress in Oceanography* and will expand visibility for COPAS research. COPAS is maintaining its international connections, and is both contributing to and benefiting from them. The eastern South Pacific and the COPAS group are becoming larger images on the world's radar screens.

About 90% of the published work had authorship restricted to individual programs, and paper titles reflect this fragmentation. After seven years, more interaction than this would be desirable. Of course, this authorship pattern does not reflect interactions such as sharing of data – e.g., from moorings, an important form of interaction that can be seen in reading some of these papers. Nevertheless, it would be good to see more intellectual interaction. One hopes that the researchers do not take the modeler as the primary hope for inter-group synthesis. It is wonderful that Dr. Tapia was hired, and he will certainly be important to certain types of synthesis. Nevertheless, that position cannot be held responsible for all or even most of the interesting, cross-disciplinary insights to be gained from the many efforts of this multi-disciplinary program. In addition, the original recommendation for this position was for a biogeochemical modeler, and Dr. Tapia is more of a larval ecologist with some expertise in physical forcing functions. That leaves the many biogeochemical projects wide open for more intense synthesis with the physical and biological projects. Perhaps this is an area where international collaborations would be also useful.

Educational activities also continue strongly, with normal production of graduate theses and recruitment of new students. The Austral Summer Institute, in December, marks a useful expansion of the educational offerings for graduate students in Concepcion and the TOPAS course extended offerings in Valdivia.

To increase interaction among research groups it also might be worth considering whether to reserve some fraction of the graduate student or post-doc positions for co-advised students. Projects that involve strong interaction between faculty of two different research programs would need to be developed to apply internally for these positions. This mode of advising does not work for all students, and one wouldn't want to dominate the program with it, but a few assistantships (out of a total of 41 graduate students now in progress) might work well to build more interaction. The right student can gain enormously from close access to two advisors.

This report indicates that COPAS expanded its outreach activities to the national level, now putting out materials in seven regions including Santiago. Special effort was given to developing outreach activities in the Patagonian region in connection with the Basal funding. Important lines of communication were opened to the national legislature regarding new research initiatives for this region. The TTKA mechanism has had apparent success involving quite a few stakeholder groups. This expansion in outreach is very welcome, and addresses comments made in previous evaluations.

COPAS has moved ahead in building Chile's systemic oceanographic capability by discussing a research platform strategy with CONICYT leadership. While these discussions will, one hopes, benefit COPAS programs in the near future, they can also help break down barriers to marine research productivity throughout Chile. Access to research vessel time is certainly a barrier for scientists at other institutions that are not in a position to invest as strongly in oceanography as UdeC. One of the longer-range goals of building this center of excellence (COPAS) should be to expand its model to other

institutions in the country. Producing human capital (e.g., PhD students) is one such mechanism for this diffusion, and the placement of COPAS graduates at other institutions around the country is evidence for that. The establishment of research vessel access for the programs that these graduates are building will become increasingly important.

Last year's report indicated an intent to meet with the external advisory committee in the coming year, which evidently did not happen. Is this external advisory committee becoming less important, or more difficult to assemble, or?

In summary, the COPAS group is doing very well, returning strongly on the investment that CONICYT has made into them. The UdeC contribution of a new building is both a validation of this investment and an important contribution to further growth of the COPAS group and its model. All three parties appear justifiably positive about this progress, and its impact appears to be spreading to other parts of the country.