

SEA AND LIFE
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ABSTRACT

*“It is a curious situation that the sea, from which life first arose,
should now be threatened by the activities of one form of that life.
But the sea, though changed in a sinister way, will continue to exist;
the threat is rather to life itself.”*

Rachel Carson, The Sea around Us (1951)

The present situation of the sea needs to be considered in a systemic view, connecting not only the environmental aspects with each other, but also relating those with economic and political decisions. There is a need for a world model, and to create consciousness in the population about the importance of the sea; therefore, the importance of including these topics into the educational curriculum, starting from the youngest of the society.

The *Grupo Mar* (in English “Sea Group”) is a research, development and action association, integrated by academics and professionals interested in a systemic approach to the topics related with the sea and its coasts.

It is composed by the following institutions:

- Instituto Tecnológico de Buenos Aires (ITBA)
- Grupo Argentino de Estudio de Sistemas Integrados (GESI)
- Colegio Atlántico del Sur de Mar del Plata (CADS)
- Fundación EcoConciencia
- Universidad Tecnológica Nacional, Regional La Plata (UTN-FRLP)
- Academia del Mar (ACMAR)
- Universidad Nacional de la Patagonia San Juan Bosco, Facultad de Ciencias Económicas (FCE-UNPSJB)

On June 8th, 2018 – World Oceans Day – the *Grupo Mar* presented a participatory project at the Puerto Madryn Regional Headquarters of the Universidad Nacional de la Patagonia, San Juan Bosco (UNPSJB), the host institution of the event.

With focus on the Patagonian coastal communities, the presentation was developed through an interdisciplinary panel and associated conferences. By using this approach, the presentation started showing several aspects of the sea issues, followed by a substantial exchange of ideas conducted to mobilize the interest and sensitivity of the participants, with the goal of reaching through them, a broader community. The purpose was achieved thanks to the participant's (mostly professionals, academics and students) involvement and their request to provide continuity to the discussions through a dialogue forum such as the one described in this paper.

Keywords: Sea, systemic, biosphere, cooperation, youth.

Introduction

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Genesis of Grupo Mar

In Buenos Aires, for more than 40 years, the Integrated Systems Group (GESI) has been in permanent activity, arising from the initiative of a group of professionals from different disciplines, united in the search to develop a unifying methodology of the scientific and technical thinking. His mentor is Charles Francois who was accompanied from the beginning by Gloria Nazer, Enrique Herrscher and Ernesto Grün.

On the other hand, during 1995, the Academy of the Sea, formally established in February 1996, began to conform, with twenty-three founding academics, seeking the encouragement, promotion and development of a maritime consciousness in our society.

In 2008 Néstor Domínguez (Engineer and systemic thinker), is invited to participate in GESI and in mid-2013, when he presided over the Sea Academy, he promotes the creation of Grupo Mar, accompanied by Eva Sarka (Education Sciences) at that time she was the president of GESI. While Ricardo Barrera, member of the GESU, being dean of the Faculty of Economic Sciences of the UNPSJB, and professor of the UNTDF joins the Group.

Javier Valladares (oceanographer and retired Navy Captain), currently vice president of the Sea Academy and vice president of the ITBA Regency Council, also accompanied the Academic Group from its origins. With time, other organizations were incorporated: the Technological University (La Plata Regional School) through Fernando Zabala, director and teacher of the university; the Eco Conscience Foundation in the figure of Rodolfo Tarraubella who deals with climate finance, Judith Cisneros (plastic artist), Alexander Laszlo, former president of the ISSS. And Patricia De Vreese (biologist and educator), among other people.

The Group as a join between both institutions, is defined by the rules of GESI, who promotes the formation of groups of study, research and collaborative work, which self-constitute, self-organize and self-denominate according to their interests and modalities (article 22 of its statutes).

Through fruitful dialogue, the purpose of a multidimensional assessment of the sea was consolidated, systemic eco-ethics, to generate a “*glocally*” awareness of the sea, highlighting the importance of the oceans on the planet. Achieve visibility, both academically and in public opinion.

The complexity of the sea necessarily implies a disciplinary, interdisciplinary or transdisciplinary task. Intergenerational information and knowledge, the contributions of science and technology in an exponential advance lead to the co-creation of a collective thought.

Simultaneously, the members of the Group were doing dissemination activities, both on their own behalf and as members of Grupo Mar.

Activities before and after the foundation of Grupo Mar

The Academy of the Sea published in the Cuaderno Talásico No. 29: “*Some philosophical reflections in relation to the sea*” (Dominguez, 2008) and the following year, Professor Charles François was invited to address the Academy on the subject: “*A vision Systemic of the Sea*” in the Ordinary Plenary Session No. 116 held on March 31, 2009 (Academia del Mar, 2009).

In the Cuaderno Talásico No. 36 of the Academia del Mar, “*Blue Amazon*” and “*Blue Patagonia*” (Domínguez, 2013) were published with the aim of initiating an international comparison of approaches on the issues of the sea.

Argentina has several thousand kilometers of maritime coastline with jurisdiction and control of a sea surface superior to the terrestrial one, and the members of the Group believe that the awareness of the sea is weak enough to assume future commitments.

Through the Technological Institute of Buenos Aires (ITBA), a nationwide survey was carried out called “*Argentina with its back to the sea*”, which demonstrated that hypothesis.

Highlighting the importance of education, the Group fostered the dissemination of knowledge of the sea at the primary and secondary levels through two books, one dedicated to primary studies: “*¡Todos al agua!*” And the one concerning secondary studies: “*Conociendo el mar*” The authors are two mariners by profession: Ricardo Echagüe and Néstor Domínguez. Now a curricular proposal in the teacher formation is being worked in which the subject of the sea is included, today absent in the same.

Promoting a systemic view of the sea, at the university level was made concrete through the project: “*A systemic view towards the management of the sea*” (2014-2018) in the FCE-UNPSJB, together with other researchers from that university, located in Trelew, Comodoro Rivadavia and Ushuaia (Patagonia Argentina). It was a concrete application of the systemic approach using the methodology developed by Ockie Bosh and Nam Nguyen, (Learning Laboratory for managing complex issues) (Barrera, 2014; Barrera & Sarka, 2016).

On the other hand, the Academy of the Sea, published a document called: “*Guidelines for a National Ocean Policy for the Argentine Republic*” (2013) in tune with the systemic perspective of the Mar Group. There was included not only a systemic vision of the sea but a management of the same sense as solution to the multiple problems that the execution of an oceanic policy will surely pose Its text has been translated into several languages.

With the intervention of Alexander Laszlo was presented at the 57th. Annual Meeting of the International Society for the Systems Sciences (ISSS) held in Hai Phong (Vietnam) in July 2013 (Sarka et al, 2013).

Throughout its history, Grupo Mar held workshops in Buenos Aires and La Plata and academic presentations at national and international events (among others, Sarka, Valladares & Barrera, 2016).

Alexander Laszlo contacted the Russian educator Pavel Luksha, at the same time coordinator and director of a project designed by the internationally renowned Russian artist Alexander Ponomarev. The Ponomarev project presented two aspects of the future: those relating to Antarctica itself and those concerning overseas and the seabed as part of the Common Heritage of Humanity. The project could not be finalized, due to disagreements about how to carry it out, but Grupo Mar made presentations in Buenos Aires and Ushuaia, and this contributed to several young people joining the activity.

Diego Luzuriaga (ITBA) proposes to model issues associated with the subject of the sea (using System Dynamics for cases of maximum complexity). For example: economic exploitation, policy design, etc. as difficult and challenging issues.

It has also been thought to conduct comparative research with other countries (as proposed by Charles François), econometric studies, infrastructures, social studies (such as the already addressed survey “back to the sea”, regulatory issues, ecological or environmental studies, etc.

The Event

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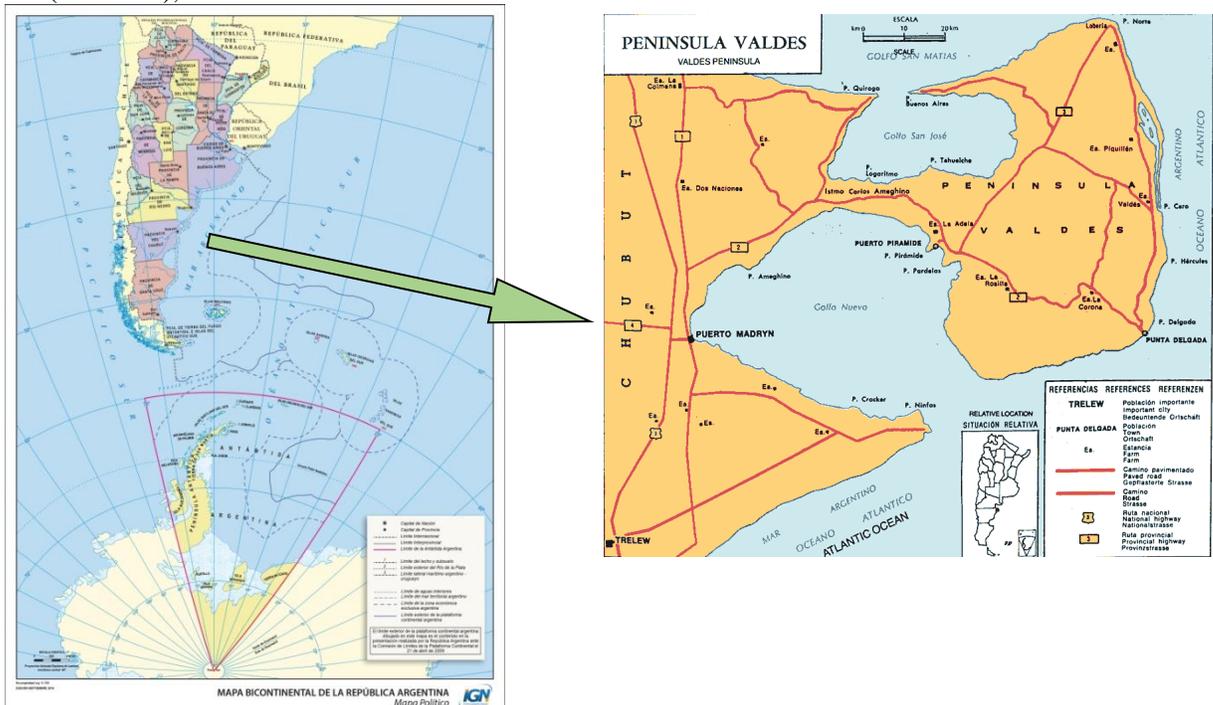


Figura I Argentina – Chubut – Península Valdés – Puerto Madryn.

On an interdisciplinary panel, diverse visions were shared regarding the challenges of the Oceans and their Coasts.

The panel was composed by Cesar Gentile and Alejandro Caniu (both prominent local professionals), together with Eva Sarka, Patricia De Vreese, Javier Valladares and Ricardo Barrera (the program host), the latter four representing the Grupo Mar.

Ways of approaching the issues of the sea

*“A vision without action is merely a dream,
and an action without a vision is just to let the time pass.
But a vision with action can turn the world.”*

-Nelson Mandela

The Grupo Mar has been developing a working methodology in recent years, consisting of a forum that is open to the public, in a participatory format with representation of local institutions. The purpose of such forums is the dissemination and contribution to the following constellation of objectives:

- Supporting systemic, cybernetic and complex thinking.
- Being sustainable and thriving.
- Exploring collective and transcultural modes of being; modelling a prototype of transcommunity.
- Promoting climate finance and renewable energy.
- Developing a system of synergic learning and systemic eco-ethics.

To fulfill these objectives, activities such as forums, workshops and conferences are carried out with an approach that integrates the following characteristics:

- Systemic, complex, prospective
- Interdisciplinary, transdisciplinary, inter-institutional
- Integrative of science, technology, and art
- Synergetic, participatory, and collaborative learning

Participation in the Puerto Madryn Forum on World Oceans Day consisted of representatives from academic, scientific and social institutions from the local area, linked to the sea, as well as by a large group of students from the UNPSJB university.

The Message of the Sea

The panel session started with an introduction based on systems thinking. This led to a spatial and temporal analysis of the evolution of the oceans as generators of life in constant interaction with macro-environmental conditions. The transition from oceanic to terrestrial life was considered, and the human activity systems, returning much of their byproducts to the ocean were analyzed, as a paradigm of the development of a human being, whose progress and interests rapidly and progressively impacts the very same environment from where he was originated.

The role of the ocean as an interface among all terrestrial systems (geosphere, hydrosphere, atmosphere, and biosphere) with a socio-cultural dimension (ethnosphere) and contributions from technology (technosphere) and specifically from technologies of information processing and communication (infosphere) were highlighted. These aspects make evident the importance of the ocean in the prosperity of natural environments, making clear its role in leading to a present and future human well-being.

Among the topics discussed, and the needs that emerged, the following can be named:

- Identification and quantification of changes, measuring the relationship among threat and risk.
- Improving the connection among scientific knowledge and the normative/managing framework.
- Generating new ways of managing the environment and the resources, including a decentralized management with community participation.
- Reaching a systemic view of an integral management of the sea.

In keeping with the historical, cultural, scientific, political and economic contexts of each era, an increasingly complex view of the oceans is emerging. This demands increasingly integrated actions within the framework of a collective intelligence that expresses and contributes to the transition from an anthropocentric to a biocentric, planetary, and cosmic, worldview.

All live in an interconnected, interrelated, and interdependent world. However, the ways of feeling-thinking-doing have not changed from the times of human separation from nature and from each other. The challenge set before now is to find human to achieve feasible, desirable and actionable futures for how to live in harmony with the people, the environment and in consideration of future generations.

The debate following the presentations of the panel showed the variety and complexity of the issues and interests associated with the sea, placing in evidence the need for a systemic approach. There emerged a full consensus among the participants that these type of panels / exercises, which shows the complex interdependence between the themes of the sea, should be reiterated at regular intervals to include more actors from the local community in each event.

All participants expressed their interest for the creation of a permanent local /regional forum soon where the levels of empathy such as the ones experienced in this form could be maintained and spread.

Conclusion

Grupo Mar is open. It has been constituted and expanded, incorporating people from different disciplines, ages and origins. It has no formal structure, nor authorities, nor regulations. It is governed by the cordiality and generosity of its members, and both Eva Sarka and Néstor

Domínguez officiate as responsible, although such tasks can be taken by those who can and should, according to their own criteria. They are united by a passion for making, spreading and becoming aware of the sea.

It is a permanent invitation to all who believe in its importance.

*"Although nobody has been able to return and make a new start ...
Anyone can start again now and make a new ending."*

*Francisco Xavier
Jesuit Missionary, 1506-1552*

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