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“If Oceans Could Speak”

Episode #4 English Transcript

Mari Carmen: Empowering women in marine sciences

[00:00:00] **MCarmen:** If you think of someone who works at sea if we say to someone: "Imagine. Think of someone who works at sea." Immediately, we will think of fishermen, we will think of sailors, we will think of pirates. We can think of all these kinds of people, but we will almost always think of a man. So we still need to change that.

[00:00:18] **Francisco:** Hello and welcome everyone to this episode of “If Oceans could Speak” - in Spanish: *Si el océano habla* - the podcast that listens to the oceans through the personal stories of those who share their life with the sea around them. My name is Francisco and together with *If Oceans Could Speak*, we are going to be chatting to the people behind those stories, in the hope that our conversations not only intrigue but also inspire you to reflect upon your own individual connection to the ocean.

In this second series we will be focusing on gender perspectives from the Mediterranean Sea and today we are delighted to have Dr María del Carmen García-Martínez with us. María is a researcher at the Instituto Español de Oceanografía and Director of the Oceanographic Centre of Malaga. Specifically, she is the head of the Climate Change Laboratory at the Oceanographic Centre of Malaga, and the responsible of the RADMED project, devoted to the routine observation and sampling of the Western Mediterranean. She has written numerous research papers, congresses contributions, books and has participated in 25 research cruises. She has always developed a sense of responsibility in making science knowledge available to the general public and since March 202, she is the chair of the European Marine Board Communications Panel. With IEO, she is moreover involved in Océánicas, which tries to promote gender equality in science and I am pretty sure that we will talk about it during the interview.

Welcome María!





[00:01:42] **Francisco:** The first question is that you've been working for a long time in the field of the ocean, but, when was that inspiration born? To dedicate your work to the sea and the Mediterranean?

[00:01:52] **MCarmen:** Well, my inspiration came late to be honest. I haven't had a calling towards the sea since the beginning. I knew since I was a little girl that I wanted to devote my career to science. That was so clear to me, I didn't mind if it was physics, chemistry, biology... I didn't mind. I wanted to work in Stem, and I chose that branch in high school. I think I chose to study biology, not because I had a passion for it, but because I had a wonderful teacher who opened the path, so I decided to study biology. And it has not been hard to me. Afterward, I navigated towards the sea, but it was by chance. I was a lab coat biologist and my specialty was genetics and microbiology. And in the end, I have turned into a water-boot biologist because I go to the sea. So my passion for the sea has been a posteriori. Once I started my career at the Spanish Institute of Oceanography, I discovered the wonder of working in the sea and the opportunities it has for all of us, since my path has been a little strange. My vocation did not start when I was a little girl. Of course, I had it very clear since I was a child.

[00:03:04] **Francisco:** Well, the important thing is that when the vocation arrives, it arrives in different ways, but it arrives. I suppose that you have many memories linked to our Mediterranean Sea, is there any that you would like to share?

[00:03:22] **MCarmen:** I have a lot of very nice memories because fortunately I was able to do many oceanographic campaigns. In fact, I specialise in marine climate change in the Mediterranean and I lead a project that is dedicated to the systematic observation of the sea. So we go out four times a year monitoring our waters. I cannot choose a single memory, it is impossible. Because it's so nice when you're at sea, to have that opportunity to see those sunrises, to see those sunsets, although we also have had bad times. But even when you have a bad time, there are times when you see a swordfish or you see some dolphins or some pilot whales or you see a whale or a sea turtle and then everything goes away. I would not be able to keep just one memory, because everything is so beautifully engraved in the memory. When you say: I am in full contact with nature, even though I am on a boat where I have a lot of technology, but I am so in contact with nature, that I could not be able to decide on a single moment.

[00:04:25] **Francisco:** Yes, yes. I am aware that it is a complicated question. And it's also important what you say, that you have had rough times sometimes.





Everyone imagines the sea as a calm, relaxed place, but there are times when it can also be very hard.

[00:04:38] **MCarmen:** I, for example, get seasick. I mean, I know I'm going on an oceanographic campaign and I know that for the first two days I'm sick. But nothing happens. I know that after two days it goes away. These two days I feel bad, very upset, vomiting if necessary. But you know that everything will get better and everything goes well. It is always worth it.

[00:05:00] **Francisco:** I guess throughout this time, from the first time you made contact with the Mediterranean until today, there has been some evolution in the way you see it, and how you relate to the Mediterranean. Have you seen any change in that relationship?

[00:05:14] **MCarmen:** In my personal relationship. Of course, it has changed a lot. I came to the Mediterranean, I tell you because all my life I have been drawn to the Atlantic. Because of my birth, but I have dedicated myself to study the Mediterranean and my relationship with it has changed profoundly.

It is the sea of seas. The sea of cultures, the sea of people, because it is surrounded by people and, scientifically, for me it is a laboratory, a natural laboratory where all the phenomena that occur on a planetary scale are reproduced on a much smaller scale, which have an analogous impact on the Mediterranean. This allows us, researchers and scientists, to use this small and large sea at the same time to use it as an absolutely natural laboratory to study it. It is very influenced by us, by humans, who live closer to the coast and who have a direct impact on it. So, the vision that one has of it is that of a threatened sea, of a sea that needs protection. But nevertheless, it is also a sea of culture and life. So that is why my perception of this sea has evolved so much over time.

[00:06:35] **Francisco:** Of course, we are talking about science. This chapter is also about women and the sea. So, if we put the two parts together, we get to science and women, and I think it is important to start talking about this topic as well. Fortunately we are talking more and more about women, but what challenges do you see when we talk about this?

[00:07:14] **MCarmen:** Oh, there are still many things to do, indeed. As you rightly say, a lot has already evolved in this area, but there is still a lot to do. We





are talking about the sea. The sea is classically a very masculinized territory. If you think of someone who works at sea if we say to someone: "Imagine. Think of someone who works at sea." Immediately. We will think of fishermen, we will think of sailors, we will think of pirates. We can think of all these kinds of people, but we will always almost always think of a man. It's very rare for someone to think of a woman who is a sailor, who is a mechanic, or who is a researcher who is working at sea. So we still need to change that.

And if we talk specifically about my area of interest which is marine research there is still a long way to go. Fortunately, we have been making progress, but there is still a long way to go because there are very few women in positions of responsibility. I participate in European networks, and in the European networks, you can see that there is still a lack of female presence at those high points of the scale where we also have to decide and participate in these decision-making positions. That is what I notice.

[00:08:22] **Francisco:** Because that absence of the feminine part is a part that is lost in the ocean of that part of humanity. And also a part that the female part is missing from the ocean, that could contribute as well. How would you encourage girls or women who may be listening to us? Let them say: "ah, let's listen to the ocean, to know what it can also contribute to us".

[00:08:50] **MCarmen:** Of course, in other words, we have to encourage girls, especially young women, to get closer to the world of science. And getting closer to the world of science, close to the world of oceanography, means that you get closer to an environment that is both amazing and unknown at the same time, so close and so far away.

Encourage them, of course, to participate, to think that this is not for men or women. This is pure and hard science. And hard science is done exactly by men as by women. We are all capable of doing it in exactly the same way. Encourage them that this world, although it may seem a bit masculinized, fortunately, it is not. When you embark on an oceanographic ship there are things that are right, there are things that are not exactly right, and there are things that are wrong. But well, you work, you go to work on a ship and you behave exactly the same as any other colleague.





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You don't have to be afraid to get on board, or be afraid to leave home, or go out of your comfort zone. We have a contribution to make, not only to oceanography but to science in general. We are half of the talent on this planet and half of that talent has to be harnessed. Scientific careers are complex careers in which it is difficult to find stability over time. There is a period, especially for women, after you start your studies, many years go by before you manage to stabilise yourself. Those are the years where normally one has to decide if one wants to go more for the family or if one wants to decide the path of science, which is so, so complex where maybe one does not manage to get a stable life until the age of forty.

And in the meantime, what happens? That is why we lose so many women along the way. Many more women than men start their scientific careers, and many more women than men finish their doctoral theses. We start the process of stabilisation with almost as many women as men, but they manage to stabilise and evolve in the scientific career, and that is where we have a great loss of female talent. That is what is called the leaky pipeline. We start with a very large pipeline, with many women, with a lot of flow, that go little by little advancing throughout life and that we are losing that woman, those drops that we lose along the way, in the end they end up in the sea. We have to recover those drops. We have to ensure that the scientific career, particularly in oceanography, which is also a very complex career, is not lost and that this talent is maintained.

[00:11:20] **Francisco:** That is to say, that this dilemma between family and work should be thought about in both of the genders, that it should not be an intrinsically feminine thing, but that it should really be raised in both and that, well, sometimes one, sometimes the other, but that in the end the pipeline should be the same for one as for the other.

[00:11:38] **MCarmen:** Indeed, it would be necessary to look for strategies. Obviously, our biology is different from one to the other. That is obvious. But well, there must be some tools. We have to look for those tools that in Spain, some are already developed, some tools that allow us to keep women in this scientific career.

[00:11:56] **Francisco:** If we talk about science and oceans, we have to talk about OCEANICAS, and the best way to explain it is to let you explain, what is OCEANICAS?





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[00:12:06] **MCarmen:** Oh, OCEANICAS, for me, the love of my life. OCEANICAS is a project that emerged four or five years ago when a group of women from the Spanish Institute of Oceanography decided to ask for funding to highlight the role that women have played and still play in marine science.

We have included 'HISTORY', which has three main pillars. A first pillar where we emphasise the value of our pioneers. These historical women have achieved greatness or have opened doors for those who come after us. And another pillar, which we call 'OCEAN WOMEN OF TODAY' where each of us tells her story, what she does. We have included stories not only from women who work at the Spanish Institute of Oceanography, but also from engineers, managers, sailors, mechanics. Anyone who has a connection with the sea can come to Océánicas and tell their story. And then we have another part, which are the 'OCEANIC BLOGS', where we tell how people work at sea and these kinds of things. Our objective is: We are going to highlight the role of these women, we are going to recover these stories and we are going to try to generate scientific vocations. We are going to put ourselves, and expose ourselves publicly, so that the girls see us and see that the people who do science are women like them. Like their mothers, who go shopping, to the supermarket, and go about their daily lives like anyone else. But, nevertheless, we have been lucky enough to end up working and dedicating ourselves to something as exciting as this.

Océánicas, for me, is no longer a project. Because it has become a movement of sorts. We work together, women from all the oceanographic centres, from the IEO, there are ten of us, but not only from here. Women from other scientific institutions have joined us. We have incorporated women managers, so for all of us, there is a common word, **oceanic**. We all know it, we all talk about it and we all fight for the same thing.

[00:14:05] **Francisco:** The truth is that anyone who does not know the project should take advantage of the Internet to look it up because it is impressive and the way I wanted to highlight is how narrative storytelling is a way to link you to all these issues. I would like to ask you: how did you come up with this way of doing it, why is narrative so important within OCEANICAS and not limited to collecting biographies of people?

[00:14:31] **MCarmen:** We wanted this to be accessible and visual and for people to like it. We realised that by telling in first person what we do. In addition, we have achieved something that we did not count on, which is that we have not





committed a tool for scientific dissemination because we tell what a lot of women who are dedicated to science do and each one does something different. So we are also disseminating our research results. But for us, it was important for the narrative to be very simple, so that people could access and visually like what they were seeing, that they liked it and that the stories we told were not a big book, not a big boring book, but that they were well-told stories.

That the texts are easily accessible and that people can understand what we are talking about. That language, above all, is a language that any of us use in everyday life. I think that has been another great success. We have been very concerned about the details. We have been very concerned that the illustrations are beautiful, and that they are appropriate. Then having this visually has also made it accompany the story and the narrative behind it.

[00:15:37] **Francisco:** So again I encourage the listeners to look at it because it is a pleasure in any sense, to read or to see it. But 'OCEANICAS' is not limited only to what we are telling, because, well, it is a personal experience. An 'OCEANICAS' meeting was organized, and several of these topics were discussed and one of them was the issue of sexual harassment on oceanographic ships, which I, as an oceanographer, have participated in many ships. I recognise that I had never stopped to think about it and I was very surprised by the figures and the testimonies that were exposed there. I think it is something that is important to comment on.

[00:16:16] **MCarmen:** Yes, look, as a result of 'OCEANICAS', we also obtained funding from the Ministry of Equality and we participated and carried out that first 'encuentro oceánicas' (OCEANICAS gathering), and we hope that there will be a second one. I am sure there will be. We sat down to talk about all these issues and we tried to include men who will also participate in all this. We held this meeting because, among ourselves talking about this issue, preparing this meeting, we started to talk and ask ourselves if any of us had ever suffered sexual harassment of any kind on an oceanographic ship, which is a complicated place. Because you are locked up, you are away from home. So maybe we didn't tell stories, but we realised that there were stories around us, there were always people who knew someone who had experienced something. So we decided to do a survey.

Among the participants to find out how many of these people who were participating in the meeting, who were planning to participate in the meeting, had



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suffered sexual harassment on board of a ship. And the most surprising thing, and I say the numbers exactly, is that of the two hundred responses that we had - in the meeting participated about four hundred people from all over the world, which was a success - but in the previous survey participated two hundred, which also seems to me a very considerable number, 28.4% clearly said they had suffered sexual harassment and harassment based on sex in their work aboard an oceanographic vessel. But the most surprising thing is that 9.8% of the people surveyed said that they could not recognize whether or not they had experienced it. I don't want to say that ships are dangerous places, because ships are places just like the street. What happens is that they are different places because there is no possibility of escape. And what we did realise is that there were not only these numbers, which are already frightening. To think that about a third of the women who embark on an oceanographic ship have suffered some kind of harassment of this kind, the most frightening thing is that we do not know how to act.

What happens to you if this happens to you on a ship, how do I act, who do I tell? And we also realised that in many cases it happens with young girls who come and maybe they are still initiating and then they prefer to keep quiet, not to say anything. Just in case next time they don't take her to the oceanographic campaign. It was very good to see, because, of course, all this is anonymous, absolutely confidential information, but it allowed us to have this information to work with. And what it has allowed is to work on ship harassment protocols, so that you can know exactly if something happens to you, who you have to go to. Which person on the ship is the one who can give you confidence. If it's the campaign manager, if it's the captain or a colleague. To have those protocols established on board, because we were not aware of what those protocols were. I always remember that it is a ship in an enclosed space and that is the added difficulty. But it was, to tell you the truth, very surprising.

Well, for me it was heartbreaking to see the results of the survey because I did not expect it to happen or that those numbers would be so large.

[00:19:31] **Francisco:** Yes, I recognize that it was the same for me, and above all I realised that there were many things that I did not know. Not mainly because of ignorance, but because maybe I did not know how to identify them and then you start to think and say that maybe that thing I saw could be it. So it seems to me that this kind of thing is very important to visualise and to make it known.





[00:19:54] **MCarmen:** But I insist that ships are not dangerous places. Let there be no feeling that a ship is a dangerous place, because we are not only talking about oceanographic ships, we are also talking about fishing vessels, because women do not only embark on research vessels. We have to remember that we have women researchers who are dedicated to fisheries observation and they embark on boats, on commercial vessels, that is, there are many types of vessels. I do not want to make it seem that these are dangerous places, but, well, there are certain behaviours that occur that should not occur.

[00:20:27] **Francisco:** I think it is interesting to point out the idea that no one who is listening to us would say “I do not want to distance myself from it”.

[00:20:30] **MCarmen:** No, no, no, no, it is far from it.

[00:20:33] **Francisco:** Because I suppose that you have also seen a change, or I would like to assume, in the inclusion of women in the whole issue of science campaigns. All that in the last few years. And I wanted to ask about that, if there has been a change or really the change has not been as much as it seems or as it should be.

[00:20:54] **MCarmen:** Look, I can't say that I have seen a very big change in the twenty-something years that I have been in my career, because I have to say that also in my institution the number of women and men is close to parity.

The difference is in the higher levels, where there are always many more men than women, but in the initial levels, the technical scales and all that, the numbers are equal. Yes, I notice that the young girls, the younger people, come better prepared, they are more aware of this issue we are talking about. I believe that what is happening is that we, the others, who are from a previous generation, are already senior. Well, maybe we have this type of behaviour more internalised and more naturalised, but they make us open our eyes.

They make us say to ourselves. Wow, all these things that we were talking about before, all these things that happen and that seem normal to me, are not normal. And that type of behaviour that we have not been able to identify, which I think is the 9.8% I was referring to before. Young girls are already better prepared. They clearly identify that this is an anomalous behaviour, which should not happen. Fortunately, that is where the progress is noticeable.



[00:22:13] **Francisco:** Yes, fortunately, and effectively. Just to finish, as the last question to go back to the initial topic. If you would like to share with the listeners a reflection on the Mediterranean, a thought, or a concern that you have transmitted, what would you say, if the Mediterranean could speak?

[00:22:35] **MCarmen:** Well, I believe that the Mediterranean is calling us. More than speaking. The Mediterranean is calling us continuously and it is calling us loudly. It is shouting at us, saying: "Please, be careful with me. I am an ancient sea. I am a small sea, I am a sea that has little communication with the rest of the planet and I am a sea that is tremendously threatened.

We are the ones to blame for the threats that our Mediterranean is suffering. To remember again that it is a sea of cultures. It is a historical sea with an exciting history, which has served as a means of communication between different continents, but which is not calling continuously. I tell you, it does not call very loudly to tell us: "protect me, you have to protect me". We have to fight against climate change. We have to fight against pollution. We have to fight against the plastics that are arriving in this sea that is tremendously threatened.

[00:23:37] **Francisco:** Well, it only remains for me to thank María Carmen García, director of the Malaga office of the Spanish Institute of Oceanography, for her participation in this podcast, and as always, it is a pleasure to listen to you.

[00:23:52] **MCarmen:** Thank you very much, a pleasure to be here with you, really.

[00:23:56] **Francisco:** 'This podcast is brought to you by members of the EU4Ocean Coalition and was made by the If Oceans Could Speak production team. Led by Anna Saito, co-organised by Penny Clarke and Arne Riedel, and presented and edited by Stefan Kirchner, Jen Freer, Vera Noon, Agness Nohra, Anna Maria Marino, Pierre Strosser, and me, Francisco López Castejón.

Thank you for listening. We will be back next week with a new story from the Mediterranean which will be in French. There will be a transcript and a translation into English if you want to follow along and I really recommend that you do! So, if the oceans had a voice, what would they say to you?"

