



marine technology SOCIETY

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Member Profile: Assia Edderouzi

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Assia Edderouzi, Manager Ocean Sustainability Programs, Fugro

MTS: Tell us a little about yourself. Where did you grow up? Where did you attend school (grad/undergrad/etc.)? Were you always interested in the marine sciences?

Assia Edderouzi: I was born in Kaf El Ghar, a small village in the mid Atlas Mountains of Morocco. I moved to the Netherlands at a young age, and grew up in Amersfoort, a very historic and attractive city to the west of Amsterdam. The city has some amazing classic canals, Dutch houses and historic sites, so I'm proud to be an "Amersfoorter". Growing up, we'd go on road trips to Morocco each summer to spend a long stretch of time with our family and friends living throughout the country. I'd always look forward to the part where we'd cross the Strait of Gibraltar, the channel connecting the Mediterranean Sea with the Atlantic Ocean, lying

between southernmost Spain and north-westernmost Morocco. I've always found it endlessly fascinating to watch the ocean from the boat. I loved the interplay of sun, wind, and water, and the changing colours and moods of the ocean. Back then I had no idea that, years later, I'd be so closely involved in mapping that very same ocean.

I studied Public Administration and Organisational Science at the Utrecht University because of my passion for social causes and interest in policymaking and government agencies. I learned how to analyse societal problems and critical challenges faced by governmental organisations and how to design effective intervention strategies in response to them. My childhood fascination with the ocean was revived in Abu Dhabi, when I changed career direction from policymaking at the Dutch government to project and programme management at Fugro. As the world's leading Geo-data company, Fugro has many clients in the marine sector and much of our business takes place offshore.

MTS: Talk about the importance of both success and failure in shaping your career.

AE: After graduation, I started my career at the Dutch government as a junior policy officer. It was very exciting to be part of such a big and impactful body, but also quite frightening, because a small policy mistake could have big implications for the whole society. Luckily there were enough senior colleagues around me to mentor me and help guide my development. During the first few years of my career I came to realize that overcoming fear and insecurities is a very important step in learning and growing both professionally and personally. I learned how to acknowledge my limitations and allow myself to make mistakes, and I found out that failure fosters humility. This was vital for improving my leadership skills.

MTS: Who were some of the most important mentors in your career?

AE: I am fortunate to have been taught, influenced, and inspired by some of the greatest and most caring individuals during my career so far, both at the Dutch government as well as at Fugro. Early on in my career, I realized the importance of having a support system. In my first job at The Royal Netherlands Meteorological

Institute, I was blessed to have a manager that provided such a support system. She was aware of how new I was to the working world and helped me navigate the organisational and office political processes. When I moved to a different part of the ministry, together with other junior policy officers, I created a peer mentorship group where we were committed to each other's development and where we'd share our successes and learning experiences. At Fugro, they have a professional mentoring programme that was offered to me as part of a Young Leadership Programme and I joined a year and half ago. I have a mentor who is providing the insight and support that are pivotal as I grow in my career. This mentor also helps keep me grounded in my professional journey, provides direction and advice, and acts as a sounding board when I need one.

MTS: What are the marine technologies that you feel are in most need of investment and development?

AE: I believe autonomous systems are the future. As Manager of Ocean Sustainability Programmes at Fugro, I'm involved in two very important ocean science initiatives: the United Nations Decade of Ocean Science for Sustainable Development, and The Nippon Foundation-GEBCO Seabed 2030 Project. Seabed 2030 is a global initiative to inspire the complete mapping of the world's oceans by 2030 and compile all bathymetric data into the freely available GEBCO Ocean Map. It supports United Nations Sustainable Development Goal 14 and is recognized as an important initiative in line with objectives of the Decade of Ocean Science, which recognizes that a wholly mapped ocean is a key enabler. Such a map will facilitate a heightened understanding of fundamental environmental processes including ocean circulation, weather systems, sea level rise, tsunami wave propagation, benthic habitat distributions, and climate change. It will be very challenging to achieve this ambitious goal without heavily investing in autonomous marine mapping technologies. We need robotic eyes scanning our oceans with the right technology. Autonomous vehicles can be used to reach remote or dangerous areas and are very efficient at gathering information. And the beautiful thing about such a development is that marine science will become more accessible. Autonomous systems and data

resources will allow scientists from a diverse range of backgrounds to be included in the research, irrespective of their ability or desire to go offshore.

MTS: What advice might you give to those starting out in ocean science and engineering?

AE: I'd advise them to invest in cross-disciplinary courses of study. I'm talking about social sciences: economics, political science, sociology, anthropology, history, psychology, law, and more. I believe that successful management and conservation of marine ecosystems depends as much on understanding of humans as it does on understanding marine organisms and their environment. A young professional with a strong background in both types of disciplines is a great asset for any organisation. Furthermore, building a good support system early in your career is also of immense importance. Find yourself a mentor and be willing to show vulnerability to learn and grow!

MTS: What technologies most excite/interest you currently in the fields of ocean science and engineering?

AE: What I find so fascinating is how little we know about the oceans and how much we're learning so rapidly with technology. At the same time, I do think there is a long way to go, especially considering the high ambitions around seafloor mapping that have been set on an international level. I believe that we need to invest heavily in autonomous mapping vehicles but also in artificial intelligence (AI) technology that could improve underwater mapping by making sense of incomplete data. That's one of the reasons why I'm very excited about working for Fugro, a company that takes R & D very seriously and keeps investing in it, even during times of crisis.

MTS: What does MTS need to do to ensure that it remains vital, growing, and relevant in the future?

AE: I'm really impressed by what I've seen from MTS so far. It's a very active and professional society. I do think MTS would benefit from diversifying its members and

network. By that I mean attracting more young professionals and having a board that mirrors the ethnic diversity and gender balance of our society. But I believe MTS is taking steps in the right direction through recent initiative to broaden its engagement strategies with Early Career Ocean Professionals (ECOPs). I'm part of a task team that has been asked to help determine a broad strategy for fostering ECOP engagement with MTS in an "attractive, meaningful and sustained" way. The strategy will include methods to connect ECOPs with the UN Decade and its activities, and the many opportunities provided by participation in the Society. For me this is an exciting opportunity to have a look behind the scenes of such a big and impactful society. I'm very much looking forward to a continued dialogue with MTS about the involvement of ECOPs with the society.

For more information, contact Assia at a.edderouzi@fugro.com