

**Expert group on skills and career development in the blue economy**

**Expert replies to the pre-meeting questionnaire**

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| **Expert first name, last name** | **Paul GERARD** |
| Organisation, position | Board Member Flanders Maritime ClusterCEO Port of Oostende |
| Country | Belgium |
| Field of interest/expertise/experience | Blue economy – Blue energy – Skills Development |
| Experience in skills and career development in the blue economy | Vast experience in setting up organisations and infrastructure for the support of construction and maintenance of offshore wind farms.Involved in research and experimental project on wave energy, aquaculture in windfarms, etc. |
| Best practices and/or success stories to share with the group | Building and expanding Belgium’s only true Blue Growth Cluster in the port of Ostend, with particular attention to prepare local workforce for the new Blue economy by education and training. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Social impact of Blue Economy, societal change, adaptation of (technical) learning programs for all ages.Improve awareness of possibilities of Blue Economy. |

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| **Expert first name, last name** | **Tim Deprez** |
| Organisation, position | Ghent University, Coordinator Graduate International Training in Marine Sciences (MSc, PHD, … ) |
| Country | Belgium |
| Field of interest/expertise/experience | Marine Graduate training, International Joint Training initiatives, skills development, Data Management, ocean literacy, Coordinated initiatives in the area of organizing training (courses, internships, … ) |
| Experience in skills and career development in the blue economy | Experiences are threefold:1. I have been involved in teaching and coordination of Joint International Master Programmes in the field of Marine Sciences. Many of the graduates of these programmes end up in various blue sectors. International Master Programmes are an excellent vehicle to ensure a proper match between the training offer and the job needs. See : [www.imbrsea.eu](http://www.imbrsea.eu) / [www.embcplus.org](http://www.embcplus.org)
2. I have been the coordinator of the first Joint International Doctoral School in Marine Sciences ([www.mares-eu.org](http://www.mares-eu.org)) Via this initiative we worked a lot on a skills portfolio for doctoral researchers, in view of their later employment outside academia. I was at the doctoral level also involved in working groups organized via EuroMarine and the European Marine Board.
3. I am coordinating the MarineTraining.eu initiative. This portal aims to group all sea-related training initiatives. In a first phase emphasis was paid to graduate training. More recently, also short courses were included, as well as practical trainings, etc. The portal aims to provide services to training organizers such as E-platforms, certification, data collection, etc.
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| Best practices and/or success stories to share with the group | 1. Setup of the IMBRSea Master programme. This programme, organized by 8 Universities in seven EU countries is a programme that could serve as a model for other programmes for the following reasons:
	1. For a first integrated semester all universities came together and agreed on the content and final competences of all study modules. As such students have indepently where they followed the training exactly the same formation and skills.
	2. Specialization modules can be easily added and removed based upon the changing needs of the job market. These modules corresponsing to 18 ECTS can be offered by the best fit partners.
	3. A common interdisciplinary work format is created for all students in the programme and agreed by all the universities participating for Internship, Thesis work, Data Management, Communication, Interdisciplinary joint school and an annual symposium with workshops and job market.
2. The Marine Training Portal ([www.marinetraining.eu](http://www.marinetraining.eu)) is a platform that is frequently used by students, trainers, etc for several purposes. More and more initiatives and organisations use the platform to organize their training related activities. Elements that can serve as good practice are the training catalogue, the internship catalogue and the services that are provided to training organizers.
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| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | * Mobility and internationalization: important element is that we should encourage mutual recognition of training provided in different regions and ensure that common learning outcomes are obtained.
* There is a need to describe job profiles in marine sector and link these to the available training.
* Can we aim for a European Certification of training both in and outside academia? This would give clear and correct information regarding potential future possibilities of graduates.
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| **Expert first name, last name** | **Blagovest Belev** |
| Organisation, position | Nikola Vaptsarov Naval Academy, Associated Professor  |
| Country | Bulgaria |
| Field of interest/expertise/experience | Energy Efficiency in Shipping industry, Safety of Navigation/Maritime education and training, Safety of Marine Navigation/30 years |
| Experience in skills and career development in the blue economy | My career started in 1991 in the blue economy. All my skills and career development have been in this field. During my educational career, I have been a part of maritime business as deck officer on board of merchant vessels and person in charge for the safety of a shipping company.  |
| Best practices and/or success stories to share with the group | … |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Maritime sector at all – education and training of seafarers, improvement of vessel’s safety of navigation |

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| **Expert first name, last name** | **Zacharias Siokouros** |
| Organisation, position | President; Maritime Institute of Eastern Mediterranean |
| Country | Cyprus |
| Field of interest/expertise/experience | Blue economy, Raising awareness and Visibility of Blue Careers and Skills Development, Maritime Technology, Shipping in General |
| Experience in skills and career development in the blue economy | Naval Architect and Marine Engineer; Technical Manager in Shipping Companies in the past and currently Manager of a leading classification society in Cyprus; very much involved in the provision of Maritime Education and Training both STCW and non-STCW; as well as in Awareness and Visibility Campaigns and Lectures in local Universities and Schools. An approved Trainer by the Human Resource Development Authority of the Republic of Cyprus. Involved in the currently running project “MENTOR - Blue Career Centre for Eastern Mediterranean and the Black Sea” |
| Best practices and/or success stories to share with the group | Had been instrumental in establishing back in 2006 a Maritime Training Centre providing STCW approved training; Facilitated the establishment in 2016 of the first of its kind Cyprus Maritime Academy; providing both STCW Certification and Academic BSc; with the active engagement of the local shipping industry; currently working for the establishment of a Maritime Hospitality Academy with local university and major Cruise Operator; and an Offshore Training Centre with industry involvement in order to develop the skills needed for the emerging Oil & Gas sector. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Improve the image, raise awareness and visibility; enhance standards of training; facilitate the establishment in EU of appropriate world class infrastructures for the education and training in aspects such as Maritime Technology; Marine Biotechnology; Offshore Training; and to highlight the importance of engaging with the Industry in developing courses and research programs that will address their actual; present & future needs; directing EU funds in this direction. |

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| **Expert first name, last name** | **Jan Boyesen** |
| Organisation, position | Head of DevelopmentMDC - Maritime Development Center |
| Country | Denmark |
| Field of interest/expertise/experience | Skills development for the maritime industry. Technical training and skills, vocational internships and recruitment for maritime educations at all levels. |
| Experience in skills and career development in the blue economy | 3 years as overall responsible for The Danish Maritime Cluster project, where MDC together with universities, maritime schools, knowledge institutions, associations, businesses and authorities created maritime educational programs ranging from shorter bachelor degrees to graduate programs and ph.d funding. <http://www.dkmk.dk> 2 years as overall responsible for The Future Maritime Craftsman project, where MDC together with vocational schools, business associations and authorities work on increasing the skills levels and the amount of graduated technical vocational students for the maritime sector. <http://www.xn--maritimhndvrker-olbu.dk/>  |
| Best practices and/or success stories to share with the group | MDC has helped establishing 178 new vocational internships among maritime industry companies during the last 12 months in a close collaboration with vocational schools and maritime industry Associations. This work will continue for the next 2 years and help the maritime sector in Denmark closing the skills gap for technical staff and getting access to much needed talented workforce.  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Work on attracting talented young people into the industry by showing life long career paths with great salaries as well as interesting and meaningful tasks. Create closer collaboration between the educational institutions and companies in order to increase industry relevance of educations and skills levels of students as well as boost the amount of graduates that are relevant for the maritime industry.Address the needs for technical skills in the industry in order to help maritime companies develop and innovate and thereby maintain the competitive edge of the European industry.  |

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| **Expert's first name, last name** | **Michael John** |
| Organisation, position | Sea Teach S.L. Director and Chief Instructor |
| Country | Spain |
| Field of interest/expertise/experience | Small Commercial Vessel (SCV) sector, Commercial qualification Recognition.Common Core Qualification models for the maritime sector. |
| Experience in skills and career development in the blue economy | With 20 years experience in the maritime sector, Michael is the Chief Instructor, RYA Yachtmaster Instructor and Principal of Sea Teach S.L., the Sea School. He is responsible for all training activities for the school side of the business and day to day management. Michael is an expert on all training standards and syllabi for the SCV sector for the UK’s RYA/MCA system.Michael is in regular contact and exchanges with fellow schools and the RYA/MCA on performance related matters regarding standards, regulations, safety and syllabi for qualifications of manning within the SCV sector.Through the EU project work, Michael has gained significant knowledge and experience regarding qualification analysis and has been involved with much of the development work in the TRECVET project.The TRECVET project developed a methodology to objectively compare Small Commercial Vessel Skipper qualifications from three different EU Member States-UK, DE and ES. |
| Best practices and/or success stories to share with the group | 1) 2011 Project Team-TRECVET Project.(Awarded Best project 2013). www.trecvet.eu2014 Project Team TCC-SCV Project: www.tcc-scv.euBoth projects looked at the problem of lack of recognition between EU Countries for similar SCV qualifications. The TCC-SCV project produced a methodology that resulted in a European Common Core qualification between seven EU Member States and to allow for any differences between these national qualifications, presented a range bolt on modules to allow for cross border exchange. 2) The project work led to an invitation from and cooperation with ICF to co-write “The Assessment of the Impact of Business developments improvements around Nautical Tourism”Planned publishing date: Spring 2017  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | 1) The development of a European Common Core Qualification for the SCV sector involving all 27 member States.Currently, 25,000 professional skippers are restricted to work on other flag vessels to that of their own qualification.A European Common Core qualification would allow the free movement of professional skipper to work on other National flagged vessels.2) Developing a Sector Skill Alliance for the boating sector that connects with the sector skill alliances of the shipping industry.3) Making boats Greener-For example:* More fuel efficient,
* More energy alternative,
* Less toxic substances in anti-fouling products, or
* More innovation for anti-fouling systems,
* Waste disposal control
* Retired boat recycling
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| **Expert first name, last name** | **David Appleton** |
| Organisation, position | Nautilus International, Professional & Technical Officer |
| Country | UK |
| Field of interest/expertise/experience | Training and Development, Career progression, Maritime Safety. |
| Experience in skills and career development in the blue economy | Former Merchant Navy Officer. Member of various committees dedicated to developing and maintain standards of training and certification of maritime officers in the UK including, the Merchant Navy Training Board Technical Committee and Main Board and also attendance at IMO HTW as part of the International Federation of Ship Masters Associations (IFSMA). |
| Best practices and/or success stories to share with the group | Involved in the implementation in the UK of several new certificates and training programmes including new STCW 2010 qualifications and alternative programmes such as apprenticeships.  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Improving the image of the maritime sector by ensuring that standards of training when presented as equivalent are in fact equivalent. |

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| **Expert first name, last name** | **Giuseppe SCIACCA** |
| Organisation, position | Conference of Peripheral Maritime Regions of Europe (CPMR), Senior policy officer |
| Country | France |
| Field of interest/expertise/experience | Blue economy, skills development (identification of skills gap and setting-up of new curricula), mobility of students and jobseeker in the field of the maritime economies/sectors, blue internships, |
| Experience in skills and career development in the blue economy | Coordinator of the CPMR Vasco Da Gama initiative:Project manager of the project “Vasco Da Gama - Training for Greener and Safer Maritime Transport “ (VDG-TGSMT). The aim of the VDG-TGSMT was to contribute to the setting-up of new and/or more innovative curricula targeting cadets and/or master marina. The project addressed specific “skills gaps” such as maritime safety and reduction of environmental damage- and lay the foundations for mobility within Europe, involving education and training institutions (along the lines of a ‘maritime Erasmus’).<http://www.vasco-da-gama.eu/> |
| Best practices and/or success stories to share with the group | The project Training for Greener and Safer Maritime Transport “ (VDG-TGSMT). <http://www.vasco-da-gama.eu/> |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | The expert group should capitalise on existing best practises and knowledge in order to provide EC with useful information to design and set up forthcoming EU initiatives in the domain of blue skills.The expert group should:* Collect information on national/regional strategies on maritime training and education programmes;
* Deliver Mapping exercises about existing maritime education and training programmes;
* Focus on challenges affecting attractiveness and promote innovative EU initiatives in order to address them;
* identification of best practises in the field of maritime educational and training programmes;
* “evaluate” the impacts of exiting EU initiatives in favour of the development of blue skills;
* Delivering technical recommendations to set-up a structured dialogue on blue skills and maritime and education programmes among European institutions, public authorities, universities, VETs, enterprises;
* Delivering technical recommendation for new EU initiatives to enhance the development of blue skills and improve maritime educational and training programmes;
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| **Expert first name, last name** | **Sarai Blanc** |
| Organisation, position | SEA Europe, Director Social Affairs |
| Country | Belgium/Spain |
| Field of interest/expertise/experience | Blue economy, skills development, ocean literacy |
| Experience in skills and career development in the blue economy | Coordinator of the Skills Council for the Maritime Technology Sector.Coordinator of the Human Capital Working group in SEA Europe and responsible of the Social Dialogue at European level. |
| Best practices and/or success stories to share with the group |  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Mutual recognition of certificates and informal learning to improve mobility and employability in the maritime sector,Raising awareness about the importance of maritime industries and attractiveness of the sector, including career mapping and analysing possibilities of mobility across the maritime industries  |

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| **Expert first name, last name** | **Claudia Vella Casagrande** |
| Organisation, position | European Community Shipowners’ Associations (ECSA), Director for Social, Fiscal and Legal Affairs  |
| Country | Maltese nationality |
| Field of interest/expertise/experience | Development and promotion of shipping related careers  |
| Experience in skills and career development in the blue economy | Co-ordinator for Sectoral Social Dialogue in Maritime Transport (Co-ordinates ECSA’s Social Affairs Committee and ECSA’s work and positions in the Sectorial Social Dialogue committee for maritime transport.)With the financial support of the European Union, ECSA and its social partner, the European Transport Workers' Federation (ETF), have worked on several projects to promote skills and career development:* “Maritime Career Paths Mapping, 2013 Update”. The aim of this project was to identify barriers to mobility and career progression at sea and between sea and shore jobs for all seafarers and suggest possible practical measures to address these barriers.
* Guide on EU Funds in the field of apprenticeship and training for shipping – Joint ECSA –ETF IPWP Project 2015-2017.

In January 2017, ECSA and ETF made a joint proposal to DG MOVE to extend the Blue Print for sectoral cooperation in skills to the shipping sector. DG MOVE has submitted this proposal for consideration by DG EMPL. ECSA and ETF are currently awaiting a decision from the Commission on its choice of sectors to which it will extend the Blueprint. The decision is expected to in late April or May and we are hopeful that our application will be successful. |
| Best practices and/or success stories to share with the group | ECSA promotes the very successful practices of its members (the national shipowners’ associations) in promoting maritime careers for example: **Danish Shipowners’ Association** – Blue Denmark Campaign – This is an initiative to increase recruitment within “Blue Denmark” (Det Blå Danmark).  It comprises Danish shipping companies, ports, shipyards, maritime service providers, maritime equipment suppliers, regulatory authorities and organisations, educational institutions, research institutions and universities. It is a coordinated and targeted industry campaign aimed to raise awareness of the maritime industry and its job opportunities and educational programmes. It seeks to increase the number of qualified applicants that match the industry specific recruitment needs.The aims of the campaign strategy include:* To establish a unified platform and industry profile for recruitment, training and job opportunities. To bring about an increase in the number of qualified applicants to match industry-specific recruitment needs.
* To unite the industry around a joint campaign.
* To raise awareness of industry career opportunities.
* To support a growth strategy concerning ‘Denmark as the leading shipping nation’.

**Cyprus Shipowners’ Association**: “Adopt A Ship” Programme, which involves assigning to elementary schools’ classrooms a particular vessel for each classroom and the establishment of direct email communication between the pupils and the crew of the vessel. This aims to inform the pupils about life onboard, cargoes carried by ships, trading patterns and geography. This exchange of correspondence helps also to raise the image of shipping and highlight its important contribution to global trade and the global economy.**German Shipowners Association (Verband Deutscher Reeder):** “We Show You Sea” - school summer holiday internship programme that enables school pupils to spend time onboard a ship and gain a first-hand insight into work and life on board. The duration of internships ranges from one week to the entire holiday. Internships are offered on tugs, ferries or large container ships, since every merchant ship offers a unique insight into an unusual career field. The result of this programme is always a win: a clear, well-founded decision for or against a career on board ship.**UK Merchant Navy Training Board (MNTB)**: The MNTB has a "Careers at Sea" brand which promotes seagoing careers to young people and their families. It has a network of Careers at Sea Ambassadors around the country. Ambassadors are volunteers from the shipping industry who visit schools and youth groups in their local area to raise awareness of careers at sea and the importance of shipping and encourage young people to explore the career opportunities available. Ambassadors range from newly qualified Navigation (Deck) and Engineering Officers through to Ship Captains, Chief Engineers and shore-based professionals. They advise all about life at sea, the training programmes, entry requirements, typical salaries, lifestyle and career openings for seafarers ashore in the UK's maritime cluster. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | In accordance with the joint ECSA and ETF submission on the Mid-term review of the Shipping strategy, we would like the expert group to focus on the following work: - strengthening the attractiveness of the EU shipping industry, which is an important source of jobs, both onboard ships – for ratings and officers – and onshore (directly and indirectly) by i) Providing for lifelong career prospects in the maritime industry and maritime clusters and facilitating career progression from rating to officer jobs, as well as labour mobility in the maritime industries throughout Europe. In this respect, consideration should be given to the findings and recommendations on career paths and obstacles to career progression laid down in the ECSA/ETF Maritime Career Path Mapping 2013 Update.ii) Enhancing the image of shipping and of careers at sea by improving awareness of job opportunities – both onboard and onshore, organising promotion and recruitment campaigns at national level and by publicising and encouraging best practices in such campaigns. |

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| **Expert first name, last name** | **Athanasios (Thanos) Pallis** |
| Organisation, position | [MedCruise](http://www.medcruise.com/), Secretary General |
| Country | Greece |
| Field of interest/expertise/experience | Dr. Athanasios A. (Thanos) Pallis is the Secretary General of MedCruise since 2013. He has worked in shaping the port sector in four different continents; working for UNCTAD, OECD, and as advisor of the European Commission, and the European Seaports Organisation (ESPO), national governments competition authorities in Europe and North America, port authorities, associations representing port and shipping interests, and several shipping and maritime related companies. In 2015 he completed a major OECD report on the state of cruise and cruise ports.Thanos served as General Secretary for Ports & Port Policy, at the Ministry of Development, Competitiveness and Shipping, Hellenic Republic, and as Memberof the National Council for the Development of State assets (2011-12).Thanos is Associate Professor at the Department of Shipping, Trade and Transport, University of the Aegean, Greece, and co-director of PortEconomics. He is also scientific coordinator of the research project "Go-Maritime". The initiative has a survey in progress since 2009, through which are presented the sociological and economic characteristics of the young people who decide to follow a profession associated with the sea through reading maritime or marine studies at Merchant Marine Academies (MMA) and Universities offering maritime degrees in Greece. Holder of a Jean Monnet grant in European Port Policy (since 2003), he also acts as Visiting Professor at the Centre for International Trade and Transportation, Dalhousie University, Halifax, Canada. He has been visiting professor at University of Antwerp, Belgium; University of Old Dominion, Virginia US; Texas A&M University, Texas US; Parthenope University of Naples, Italy; Athens University of Economics, Greece; and Hong-Kong Polytechnic University, China. His books examine the European Port Policy (published in English, Japanese, and Greek), the Common EU Maritime Transport Policy (published in English and Greek) and the Maritime Transport: The Greek Paradigm (in English). |
| Experience in skills and career development in the blue economy | Thanos Pallis, representing MedCruise, having previously participated and actively contributed at the ad-hoc experts group meetings on “Maritime Skills and Careers in the Blue Economy”.He is also scientific coordinator of the research project "Go-Maritime". The initiative has a survey in progress since 2009, through which are presented the sociological and economic characteristics of the young people who decide to follow a profession associated with the sea through reading maritime or marine studies at Merchant Marine Academies (MMA) and Universities offering maritime degrees in Greece |
| Best practices and/or success stories to share with the group | MedCruise is already advancing its work on internally as well as in partnership with cruise lines and other stakeholders in addressing any skills gaps and related challenges for the cruise sector. A key effort is the MedCruise professional development programme and the Travel Agent Programme that is developed in partnership with CLIA Europe. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Thanos Pallis is seeking to keep working on the two important key points that have been identified by the experts of the group: the skills gap and the lack of attractiveness in maritime and port sector.MedCruise has committed to continue providing to all policy makers first hand insights into skills and careers prospects that are present in the provision of port and related services to cruise lines and passengers – so that cruise activities will be among the key options to increase the number of people who might be interested in a blue economy job.  |

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| **Expert first name, last name** | **Phil Monbet** |
| Organisation, position | Pole Mer Bretagne Atlantique (Sea Innovation Cluster) and on secondment at France Energies Marines (French research institute for MRE) |
| Country | France |
| Field of interest/expertise/experience | Main background in Marine Biogeochemistry (PhD).Good knowledge and experience (>10 years) in Universities in France, Australia and UK as well as in research institutes in France and Australia. Work now for 7 years in the maritime sector mainly around innovation. |
| Experience in skills and career development in the blue economy | I had the chance to be a ‘pure’ researcher in marine biogeochemistry who moved after several postdoctoral years in the private sector (maritime cluster). I encountered most of the researcher difficulties after their PhDs and having now the industrial vision, I know better what are the pro and con of skills that are needed to succeed in some sector of the blue economy.The several years spent working in a maritime cluster give me a good overview of the blue economy.I also have a close relationship with regional authorities that are in charge of education and its related programmes. I can bring a vision of the French system and its specificities |
| Best practices and/or success stories to share with the group | Certification by our cluster of maritime formation could be a best practice. Our cluster was also really proactive to set up few years agao, a specialised master in Marine Renewable by bringing around the tables academics and the relevant industrial partners in order to make sure that the training will fit needs. (http://www.ensta-bretagne.eu/index.php/advanced-master-in-renewable-marine-energies/) |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Attractiveness of maritime jobs is highly variable. Marine environmental area (oceanography) as well as Marine Renewables is really attractive for a lot of people. Wellding and naval repairs and so on are way less attractive. The expert group could analyse why there are so much differences and how we can fix that.But that is just a guess… |

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| **Expert first name, last name** | **Claire CARALP** |
| Organisation, position | AQUIMER, project manager |
| Country | France |
| Field of interest/expertise/experience | Industry-education partnership, aquaculture, fisheries, (sea)food industry, international affairs |
| Experience in skills and career development in the blue economy | Intern supervisor, student project for the industry, development of new master degree at the university with industry support, internship fair organization |
| Best practices and/or success stories to share with the group | Organization of an internship fair to enable academics to identify where former students find a job and which skills are most valuable in the industry |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Communication on blue careers/opportunities, help academia to identify blue careers opportunities in almost all field, lifelong learning and interconnection between “inland” careers and “sea” careers |

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| **Expert first name, last name** | **Vincent LEQUENNE** |
| Organisation, position | French administration, Maritime secondary school director in Cherbourg |
| Country | France |
| Field of interest/expertise/experience | Blue economy, skills & career : maritime navigation & safety, fish activities, aquaculture & sea products recovery, ship building and innovation. |
| Experience in skills and career development in the blue economy | - In charge of maritime education (for youngs and adults) in Basse Normandie region since september 2011 (Normandie region after 2016/01/01). See several newspaper articles attached to this sheet.- Before, in charge of safety on ship for flag state and port state in Basse Normandie region since september 2002.See ethnologist interview (link to Crecet website) :<http://www.metiers-portuaires.fr/cargos_et_paquebots/entretien_lequenne.php>- After the sinking of “Erika”, a french affaires maritimes administration schooling year to change vocation from a private to a public job from september 2001 till august 2002.- First career as merchant navy & state navy officer (bridge and engine) since december 1996 & until august 2001. |
| Best practices and/or success stories to share with the group | - European works for safety on ship : joint inspection EC 99/35 directive on RoPax (with irish, british and spanish inspectors) + seminar in Lisboa with other PSCO under EMSA and in Den Hague under Paris MoU organisation. The real way to consolidate a strong Maritime Europe is to share experience of all countries / communities to build new common practices.- Navigation experiences on the Ocean at the very end of past and beginning centuries (several types of ship and navigation).- Maritime education for youngs & adults experiences :maritime skills are deeply link to good social behaviour : a school for everyone (inclusion program / girls & boys are equal / take care of unvisible handicap...)+ safety knowledge first (symbol of Daniel Rigolet)+ our ocean environment should be more respected & protected from our activities (a courageous & long way to change minds and uses)+ sharing time with other school project (Scotland around RME & maritime safety, Lietuva around aquaculture farming school) |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | - Connection of member states maritime schools with dedicated programs (MarErasmus for youngs exchange, project of european school sailing ships, … projects that are belonging to developpment of blue economy) to be prepared with states, regions and directly with schools. The idea is to build a social web to accumulate school projects in order to help them meet and after to help them grow with european fonds. This can be the beginning of a european seafarer status.- I would like to prepare myself through a 3 years work with the group to later join EC administration around this linking project. It is my way to believe in a stronger social, human & maritime Europe. |

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| **Expert first name, last name** | **François Arbellot-Repaire** |
| Organisation, position | Member of the expert group |
| Country | France |
| Field of interest/expertise/experience | Interest* Blue growth
* Fishing and aquaculture
* Naval industry
* Renewable energies
* Transport
* Marine leisure
* Atlantic Ocean and costs: maritime issues and sustainable development

Expertise: * Marine leisure sector: Industry, services, supervised activities (schools, leisure, sport and tourism), marina management,…
* Maritime education and pre-training
* European maritime strategies

Experience: * Former CEO of Nautisme En Finistere, development agency of the sector in the most maritime county of France (3800 EFT jobs)
* Leapartner of 2 Interreg marine projects
* Co-President of two Development council maritime committees (Cornouailles,300 000 habitants and Pays de Brest, 400 000)
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| Experience in skills and career development in the blue economy | My experience is mainly about the careers offered in the marine leisure economy:* Boatyards
* Nautical centers
* Services
* Marina management

I have also some knowledge about the careers in fishing and transport. |
| Best practices and/or success stories to share with the group | * The marine leisure sector represents 85 000 EFT jobs in the Atlantic Area (who would have thought that?)
* Marine leisure (leisure, boat trips, nautical sports, educational activities,…) is one the main interfaces between the populations and the sea (10 million people practising in the Atlantic Area, all aware of the maritime and coastal environment protection and of the potential of the sea economy)
* In the county of Finistère, 14 000 pupils (Primary and secondary) discover, every year, maritime environment and watersports at school within the scolar curriculum. To involve European youth is a necessary step to develop Blue Growth!
* The Atlantic Games: every year, young sailors, canoeists, surfers, lifeguards,… meet in a friendly competition between teams representing cities and regions from several countries of the west Europe: let us build together a maritime Europe!
* Channel Marine Academy, an Interreg project we managed: the successful awareness and pre-training of young dropouts (aged 18-25) about the maritime jobs and careers: fishing, aquaculture, boat building, transport, port activities, marine leisure,…
 |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | The expert group could provide advices and thoroughgoing reflexions about the development of the Blue Growth in Europe, in different sectors.We can consider that the oceans are a very important part of our future, so we have to harness our energies and strengths.Taking together into account the maritime issues and potential is a good way to build Europe.We have to think of the people and the youth because they are the condition for a future success: maritime education, maritime transversal training, highlight the maritime careers,… |

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| **Expert first name, last name** | **Angela Schultz-Zehden** |
| Organisation, position | SUBMARINER Network // managing-directors.Pro sustainable-projects GmbH // managing-director |
| Country | Germany |
| Field of interest/expertise/experience | 20 years experience in blue economy - blue growth strategies & analysis // Maritime Spatial Planning // blue business development // blue bioeconomy // strategic transnational project development // regional development // cross-sectoral – cross-disciplinary management & communication |
| Experience in skills and career development in the blue economy | 20 years of project lead in capacity building blue economy projects // facilitation of cross-sectoral – cross-disciplinary work with emphasis on blue growth development // lead in more than 20 blue economy projects developing numerous workshop & trainings & practical handbooks & guidance books // currently lead of EU MSP (maritime spatial planning) platform (capacity building MSP); Baltic Blue BioTechnology Alliance (mentorship / support programme for Blue BioTech businesses and start-ups); Implementation Strategy for Baltic Blue Growth AgendaMany years of experience as trainer of MBA programmes and professional training programmes incl. marketing, stakeholder management, logical framework analysis, project / programme cycle management |
| Best practices and/or success stories to share with the group | Multi-disciplinary mentorship programme – Baltic Blue BioTech AllianceMaritime Spatial Planning Handbook & Professional DevelopmentCross-disciplinary (e.g. natural science & business student) team & student groups & projects |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition offormal and informal learning, improve the image of the maritime and marine sectors, etc.) | Cross-disciplinary team learning and related facilitation / communication / management skills (e.g. natural science & business & management & computer skills )=> ‘Blue’ MBA ?Opening / highlighting range of job opportunities of maritime sectors – ‘new’ types of jobs (and thus related education, training, skills) |

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| **Expert first name, last name** | **Willi Wittig** |
| Organisation, position | HSB ‐ City University of Applied Sciences, Centre ofMaritime Studies, BremenDirector of Studies (Master Programs) |
| Country | Germany |
| Field of interest/expertise/experience | Maritime skills needed for the operation of fullyautomated, autonomous or autarkic ships / MaritimeHuman Resource Management / Maritime Educationand Training |
| Experience in skills and career development in the blue economy | ‐ Hapag‐Lloyd in house trainer for young ABdeck/engine Trainees‐ External expert consultant for GL MaritimeAcademy (development and conduction of maritimefurther development seminars)‐ External maritime safety and security onboardtrainer for different cruise ship operators‐ Member of the German/IFSMA IMO Delegation tovarious STCW related Committees and Conferences‐ Director of Studies of Maritime Bachelor/MasterPrograms |
| Best practices and/or success stories to share with the group | ‐ Integrated “Blue Term” for students from allmaritime/marine related programs of study at auniversity |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | ‐ Maritime/marine students mobility (harmonizedmodules, harmonized structure of study programs,…)‐ Certificates of Competences (from national toEuropean CoC’s, from national to European workforce)‐ Provide ideas/recommendations/solutions on howto solve the present lack in available onboardpositions for European cadets/trainee officers |

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| **Expert first name, last name** | **Avan Antia** |
| Organisation, position | Kiel University, Germany. Head of Graduate School “Integrated School of Ocean Sciences” |
| Country | Germany |
| Field of interest/expertise/experience | Postgraduate education, skills development, ocean literacy, careers outside academia, multidisciplinary education, ocean biogeochemistry, online education (MOOC) |
| Experience in skills and career development in the blue economy | Our graduate school has had a focus on “life after the PhD” for several years. We provide early carer scientists with contacts and direct engagement opportunities outside of academia. Alumni are tracked, and return to contribute to the programme.  |
| Best practices and/or success stories to share with the group | Networking with partners outside of academia |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Making the boundaries between research careers and the non-research careers more transparent and fluid. Creating a top-down dynamics that would provide structural opportunities for exchange of personnel in both directions |

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| **Expert first name, last name** | **Christina Kontaxi**  |
| Organisation, position | Mediterranean SOS Network (MedSOS), Director |
| Country | Greece |
| Field of interest/expertise/experience | MEDITERRANEAN SOS Network (MedSOS) is a non-profit, non-governmental organization (NGO), active since 1990, dedicated to protecting the environment and promoting sustainable development at national and Euro-Mediterranean level. To achieve its objectives, the organization works on a vast array of environmental issues, with special emphasis on the integrated management of marine, coastal and inland water resources. MEDSOS aims at raising public awareness and understanding and improve access to information, encouraging behavior change amongst citizens and foster the transition to sustainable lifestyles and livelihoods, advocating, lobbing and promoting cooperation between social partners, policy-makers and Civil Society at the local, national and regional levels, promoting active public participation in sustainable development strategies and demonstrate alternative solutions and good practices to the local communities and strengthening intercultural communication, dialogue and exchanges among European and Mediterranean partners. MedSOS has and is being involved in projects in sectors with a high potential for sustainable jobs and growth (e.g. fisheries – aquaculture and coastal – maritime tourism) while is working in marine and maritime spatial planning field to provide knowledge, legal requirements, foster the policy framework and measures for cooperation between countries in the ADRION and the Mediterranean sea basins.  |
| Experience in skills and career development in the blue economy | A marine scientist, holding a master in Water Resources Science & Technology, a master in EU studies under Jean Monnet scholarship and a Certificate of Pedagogical and Teaching Competence. An ex civil servant in the Department of Environment and Spatial Planning of the Region of Central Macedonia, Hellenic Republic and currently a freelancer and Director of MedSOS NGO. In 2012-2013 an expert on marine environment for the EUSAIR (EU Strategy for the Adriatic and Ionian Region) under contract with COFAD Consultants for Fishery, Aquaculture and Regional Development mbH, Germany. Youth worker/trainer in Greece and abroad being registered as a trainer in the Youth & Life Long Learning Foundation (Ministry of Education) in the subject of environment. Main areas of expertise are environmental protection & licensing, protected areas, coastal zone management and ecotourism.  |
| Best practices and/or success stories to share with the group |  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Foster cooperation between education - research institutes and business in the marine sector in order to better reply to the market needs and to boost the potential of the blue growth in Europe, under a holistic framework aiming to bridge the gap between the skills provided by the educational system and those required by the blue sector. Employment in the blue sector is strongly connected with an educational system and a nexus of qualifications that more or less determines the employment opportunities. Of paramount importance are the environmental / marine issues, issues related with the economic and social dimension of the blue economy industries. The sustainable development and the protection of the environment are key issues in the contemporary blue economy industry as well as for the academia and social stakeholders. So, the aim is to match the skills. New requirements by regulations urge the blue economy industries to invest in environmental technologies and tackle issues such as emissions and waste or introduce environmentally friendly practices.   |

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| **Expert first name, last name** | **Margaret Eleftheriou** |
| Organisation, position | AQUALEX Multimedia Consortium Ltd, Director |
| Country | Ireland |
| Field of interest/expertise/experience | Blue economy (aquaculture/fisheries occupation profiles)Skills development (aquaculture, language acquisition, HE & VET EU reforms (Copenhagen, Bologna processes) |
| Experience in skills and career development in the blue economy | From 1993 to 1997 edited the **multilingual aquaculture glossary** AQUALEX (Wiley, 1997). Coordinated the EU LDV projects PESCALEX (online **multilingual fish diseases** glossary in EN, FR, GR, ES, NO, HU, PL, TU, GL and **multilingual Fish Health course**(available on www.pescalex.org). Instigated and participated in WAVE (Working in Aquaculture-Validation of Experience)LdV project which **identified the skills and knowledge needed for work in the European Aquaculture sector, which produced a Master list of 238 European competencies for aquaculture production** in 10 languages (EN, FR, ES, DE, GR, NO, CZ, HU, DK, NL, and the development of an online tool allowing compilation of customized competency lists in all the above languages. Instigated and participated in the LdV VALLA project (Validation of All Lifelong Learning in Aquaculture) which provided a **framework for the validation of non-formally acquired competences by linking EQF reference points to established sectoral standards,** within a freely available online tool. She has been an active member of the ERASMUS Thematic Network **AQUATNET** since 1996, contributing reports on **Mutual Accreditation in Aquaculture**, as well as editing the **White Paper in Education and Training in Aquaculture** for the New Millennium. Guest Editor for Springer Special Issue, Advances in Education and Training in European Aquaculture and authored.co-authored 7 papers.In addition, coordinated the following EU educational projects: ONEDIN 1 & 2: Online Delivery of Interactive **Modules in Marine Science and Aquaculture** (English, Greek, Norwegian); ORION: **Virtual marine science courses** online (English, Greek, Portuguese, Swedish); PESCALEX 1 & 2: expansion of AQUALEX glossary databases into the Fish Diseases area into Turkish, Hungarian and Galician. From 2010-2015, served as **aquaculture education expert** in the Agriculture and Fisheries Mandate Reference Group of the Horizon 2010 Initiative **ESCO** (European Skills/ Competences, Qualifications and Occupations) |
| Best practices and/or success stories to share with the group | Springer Special Issue 2015.Advances in Education and Training in European Aquaculture (Vol 23, Issue 3) Guest Editor and authored or co-authored 7 papers concerning Positioning Lifelong Learning, Generic skills needs for marine sector graduates, Promotion of Language Learning, Student Mobility Measures, Master and Ph.D. developments, eLearning developments and case studies. Papers were downloaded 2244 times.Results from WAVE EU project; successful bottom-up approach to identify and describe aquaculture skills needs; VALLA tool for designing courses to meet NQF and EQF accreditation requirements. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Mutual accreditation has always been a major issue with regards to student and/or workplace mobility measures. The new EUROPASS is yet another step in the right director. The repeal of the EQF, and the subsequent renewed focus on skills acquisition, has also to be taken into consideration. Given that ECVET has not been an unqualified success (our experience in AQUATNET bears this out – the lack of interest in universities was very evident, as was their lack of interest in recognising informal or previous on-the-job learning), it is important to find appropriate measures to tackle this situation. This is one area where the skills mismatch between industry and academia originates, in my opinion.Another area that merits attention is the emergence of new jobs in the marine sector, for instance, marine cage technologies for aquaculture. There will certainly be others and one task that could be undertaken is for the group to find such new jobs and skills and to draw up suitable occupation profiles, which could then feed into the new ESCO. |

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| **Expert first name, last name** | **Pierre Erwes** |
| Organisation, position | BioMarine International Clusters Association, Chairman |
| Country | Monaco |
| Field of interest/expertise/experience | Blue economy, with focus on bio economy, investment, economic attraction, blue jobs creation |
| Experience in skills and career development in the blue economy | BioMarine is the international platform dedicated to marine bio resources. It generates each year from 15 to 50 M€ in investment, foster partnerships at international level and of course job creation. In 2016 we launched a French association which goal is to support student access to blue industry jobs. |
| Best practices and/or success stories to share with the group | MyBlueCity an interactive and immersive demo to connect universities with industry and discuss how to fill the gaps between education and industry needs |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Mapping of blue growth main demands Filling the gaps between academic training and industry needsDevelop apprenticeship and “alternance” to support pre-recruitment of studentsPrepare reconversion program for unemployed people especially in the agriculture fields |

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| **Expert first name, last name** | **Michael Ekow, MANUEL** |
| Organisation, position | World Maritime University, Sweden, Head of Maritime Education and Training Specialization |
| Country | Organization in Sweden; Expert from Ghana |
| Field of interest/expertise/experience | Maritime Education and Training, Knowledge Management, Maritime Policy and Administration, Operational Risk Governance |
| Experience in skills and career development in the blue economy | In relation to this expert group:Master Mariner (Ship Officer)Academic in the area of seafarer training and administration of international/national maritime education and training systemsInternational trainer/consultant in the assessment and certification of seafarers  |
| Best practices and/or success stories to share with the group | Training of numerous international leaders in the national administration of maritime education and training.Helping States comply with the requirements of international law in the training, assessment and certification of seafarers |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | * Certification within an international framework
* Interrogation of the links between vocational education and higher academic education
* Transitioning from one career path in the maritime sector to another
* Improving the role of maritime stakeholders in the determination and implementation of public policy on sustainable ocean use
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| **Expert first name, last name** | **Pauhla McGrane** |
| Organisation, position | Strategic Marine Alliance for Research and Training (SMART) Coordinator,Galway Mayo Institute of Technology, Galway, Ireland. |
| Country | Ireland |
| Field of interest/expertise/experience | * Ship-based practical marine science training
* Blue skills development
* Ocean literacy
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| Experience in skills and career development in the blue economy | Over ten years’ experience in managing, developing and delivering a range of innovative, offshore, multi-disciplinary ocean science training for graduates of marine science, technology and engineering. I currently coordinate the Strategic Marine Alliance for Research and Training (SMART), an award winning marine education and training cluster which pools infrastructure, facilitates and expertise to build capacity in ocean science research and develop the next generation of ocean professionals.  |
| Best practices and/or success stories to share with the group | Since 2011, the dedicated team of SMART on-board experts have delivered a series of inter-institutional, accredited, multidisciplinary, offshore modules to provide blue skills training to over 1,500 third-level students of marine science, technology and engineering in areas such as seabed mapping, ocean energy and marine technology.Internationally we have fostered strategic partnerships across Europe and globally, developing joint cooperative actions with renowned research institutes. These dynamic collaborations have resulted in a series of International trans-disciplinary, postgraduate ‘Floating Universities’ delivered in South Africa, Norway, Estonia, Italy, Germany, and Denmark. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Investigate and advise on:-Practical ship-based training for students of marine STEM industries.-Skills gaps in marine science, tech, engineering industries.-Continuous professional development certification.-Promotion of gender equity in maritime industries. |

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| **Expert first name, last name** | **Ms Paola GUALENI** |
| Organisation, position | University of Genoa – Associate professor |
| Country | Italy |
| Field of interest/expertise/experience | Teaching and research activity in the field of Naval architecture, innovative ship design, ship safety, ship energy efficiency, |
| Experience in skills and career development in the blue economy | Teaching responsibilities:- Ship Hydrostatics and Stability at the MSc course in Naval Architecture and Marine Engineering at the University of Genoa; during the course, specific attention is given to the effect of safety rules on the ship design process.- Yacht Stability (in English) at the MSc course in Yacht Design at the La Spezia branch of the University of Genoa; the focus of the course is on the special safety aspects when dealing with passenger ships.Other teaching responsibilities:- Tutor of more than one hundred graduation thesis, mainly at MSc level.- Tutor of several PhD students, member of the Doctoral School Committee in Naval and Marine Engineering, member of several examining board for the PhD final thesis discussion.- Tutor of several temporary research fellows within research activity programs, financially supported by industry and regional funding.- Supervisor of all the graduation thesis project dealing with the ship preliminary designs far as ship hydrostatics, intact and damaged stability assessment and the compliance with the relevant safety rules.- Responsible coordinator for the course “Cruise and Passenger Vessel Design” within the International university network “Postgraduate distance learning EURO-MTEC” (“Postgraduate Distance Learning Euro-MTEC is a consortium of industrial and academic partners recognised for their excellence in marine technology education and research, offering flexible vocational training for graduates who work or want to work in the marine sector”.-Lecturer for several re-training and upskilling educational programs, in coordination with Industry and regional financial support, for employed and not employed people.-University tutor of dozens of students in internships in Italian and European companies.-Attendance and involvement, along the latest fifteen years, in the activity of IMO (International Maritime Organization) with specific focus on sufficient buoyancy and stability criteria for the ship in intact and damaged condition.-Member of the Promoter committee for the course IAS - Indirizzo di Eccellenza in Ingegneria ed Architettura della Sostenibilità (Engineering and Architecture for Sustainability) delivered by the Istituto di Studi Superiori dell’Università di Genova – ISSUGE (Institution for Excellent Education of the University of Genoa. Responsible for the module of “Maritime Sustainability” and “Blue growth” (four lecture sessions).-Coordination and teaching activity for cadets of the Merchant Shipping Academy in Genoa (http://www.accademiamarinamercantile.it).-Member of the scientific committee and of the organizational board for the II level Master course in “System Engineering for Maritime Technologies” of the University of Genoa in collaboration with DLTM (Liguria Cluster of Marine Technology - http://www.dltm.it/en). |
| Best practices and/or success stories to share with the group | -Involved in planning and delivering education at the University of Genoa which is active in education of naval architects and marine engineers **since 1871.** UNIGE delivers course of studies in Naval Architecture and Marine Engineering, both at BSc and MSc level in Genoa. In La Spezia the same courses have special focus on pleasure boats and Megayacht Design. At present, **nearly one thousands students** are enrolled in the relevant courses of studies, half in Genoa, half in La Spezia.-Lecturer within a specific course of introduction to Naval Architecture, organized by an Italian industry active in shipbuilding, for students of mechanical engineering from United Arab Emirates (Khalifa University). The course is at its third edition this year.From 2014 member of the **Scientific Council of the National Technological Cluster on Transport, representative of the Maritime Transport sector**. The Cluster is working on a national basis and it is effective in networking universities, research institution and industries in order to support ministries (of infrastructures and transportation systems-MIT, of economic development- MISE, of research and university-MIUR), when setting the strategic research agenda able to boost the industry. The very same Cluster put in practice a soft governance policy for the coordination and networking in turn among the local regional clusters.  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Design educational carriers in strong link with industryEducation programs delivered in different places on EU territory, on a student mobility framework Try to find which are the useful subjects/teaching activities that enable/enhance the multidisciplinary approach that is at the base of the blue economy. |

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| **Expert first name, last name** | **Stefano Spennati** |
| Organisation, position | Conftrasporto-Confcommercio Imprese per l’Italia, Senior Advisor |
| Country | Italy |
| Field of interest/expertise/experience | Blue economy, skills development. |
| Experience in skills and career development in the blue economy | Transport and Tourism: Ongoing processes to build curricula related to new technologies 4.0 for people working on the sea (Sea Men, Deck Officers, Engine Officers..) and by the sea (land sea workers, managers of public areas that are in charge of the maintenance not only of the land space but also of the marime space inside the allocated area).Our Organisation has signed for the transport sector an agreement with the Italian Ministry of Education to introduce a dual system to help the students to get competences in EU subject, through the EU mobility between the transport and logistic enterprises. |
| Best practices and/or success stories to share with the group | Transport: Investment to prepare and then to hire only European workers.Tourism: starting from old Italian experiences to give to the tourists an active role of checking the deep sea (under the control of academics to check the results), our Organisation would like to promote, inside the total aspects related to the Blue Economy, a control of the total services that the sea can offer to the tourists ex. Shops and restaurants, around a particular area, that use system not to pollute the sea. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Our Organisation considers important all the areas mentioned in the examples, with a particular attention to the recognition of formal and informal learning. |

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| **Expert first name, last name** | **(1) Mascha Stroobant** **(2) Anna Mori - reserve list** |
| Organisation, position | (1) Coordinator of MARE\_Lab (DLTM – Ligurian Cluster for Marine/Maritime Technologies)(2) Manager Education and Training Area (DLTM – Ligurian Cluster for Marine/Maritime Technologies) |
| Country | Italy |
| Field of interest/ expertise/experience | Blue economy, skills development, ocean literacy |
| Description of DLTM | DLTM is the Liguria Region marine technology cluster that includes all the stakeholders dealing with maritime activities. The leading target of DLTM is to promote research, innovation and **education** boosting a continuous interaction and synergy between research organization and enterprises. DLTM is growing since its foundation in 2009, and actually, involves about 120 enterprises – of which, more than 90 SMEs –, the University of Genoa, all the National public Research Centres based in Liguria dealing with maritime and marine technologies (CNR, INGV, ENEA), the Port Authority of La Spezia, the Chamber of Commerce and Representatives of the Research and Defence Italian Ministries. DLTM is proactive in the frame of the Italian Maritime Technology Platform, established in 2005, which implements the Blue Book strategy of the European Commission (“An integrated maritime policy for the European Union”, 2007).DLTM is established as a consortium, under the address of the Liguria Region Administration and the National Ministry of Education, University and Research according to the general rule of Italian clusters that represent the regional excellences on specific technologies while operating as a focal point for the whole nation. In fact, the Liguria Region represents in Italy the ideal field in which marine competences can be integrated and the sea-connected regional economy has a potential leadership position. DLTM mission focuses on three main fields: (1) development of naval systems; (2) development of maritime systems for shipbuilding and nautical industry; (3) monitoring, protection, safety and security of marine environment. The attention of DLTM on dual technologies allows to boost an integration between navy and commercial technologies and between maritime industry and marine science, and offers a great opportunity for competitiveness and new business development by supporting research, innovation and education and new synergism between public and private organisations. Then, the objectives are pursued through specific development themes: shipbuilding (naval and commercial vessels), boats and mega-yachts, oil and energy offshore, naval and port systems, instrumentations and equipment for marine and underwater application, logistic and security, material for marine application.In these domains DLTM operates to support: (1) research and development processes; (2) innovation of the production systems and aggregation between public and private sector; (3) development of **human capital**, through specific activities:(3a) promotion of research through **knowledge** **sharing** among Universities, Research Centres and Enterprises;(3b) development and promotion of cooperative projects and cooperative research labs(3c) development of financing tools and venture capital, to support research and innovation projects;(3d) activation of start-up and spin-off; (3e) activation of synergies and collaboration with other regional clusters;(3f) internationalization by means of cooperation and partnership agreements with similar European clusters and related territorial marketing activities(3g) development of perspectives of self-sustainability on long terms.About 120 M€ public-private investments have been employed to support DLTM projects development. DLTM recently presented to the Italian Government, with the support of about 30 partners (including research centres, large companies and SMEs), 9 R&D projects focused on research topics concerning shipbuilding, ecology, IT and technology in the maritime sector. DLTM is associated to the European Cluster Collaboration (http://www.clustercollaboration.eu/home) network for maritime sector. The three DLTM Cooperative Research Laboratories have been created in order to support innovation, to encourage **know-how and experience exchange**, technology transfer, interconnection and information sharing between research and industrial players: (1) MPSA Lab (Measurement, Design, Advanced Simulation lab): Emissions measurement and monitoring, energy efficiency, innovative design and optimization of maritime vessels using advanced software; (2) HPC Lab (High Performance Computing Centre): creation and optimization of advanced software and platforms for parallel calculations in the relevant areas of the Cluster to develop the system functionality as well as industrial innovation;(3) MARE Lab (Laboratory for Environmental Monitoring and Research on Marine Ecosystems): monitoring and safety of marine environment through the use and testing of underwater sensors. |
| Experience in skills and career development in the blue economy | **(1) Mascha Stroobant.** B.Sc. in Marine Environmental Sciences, M.Sc. in Coastal Ecology and I’m actually following a Ph.D. degree in Marine Botany. As Coordinator of the DLTM MARE\_Lab my activities within DLTM can be identified in to four main areas: 1. Research, Project Management; 2. Technical Assistance for National and European projects (MIUR, ERDF, SEF, ENPI CBC MED, INTERREG, ERASMUS +, H2020);3. Scientific Dissemination;4.Training (co-supervisor of master degree thesis in Marine Biology (University of Pisa) and work-related stages for secondary school students).I'm a life-science technician with a special expertise in Marine Botany and Ecology. I'm a member of the DLTM\_INGV Bilateral Committee for the Management and the cooperation in the new DLTM underwater infrastructure (MARE Station) a deep station that will be soon installed on the Ligurian seabed in Bonassola (La Spezia, Italy) with a mooring line for the measurement of the water column that will be connected to European multidisciplinary network (EMSO), and will offer new opportunities to study oceanographic processes on different time scales. Skills and career development are, hence transversal activities, which are included in one of the three main areas of DLTM’ core business: Training and Education (Area Formazione) that is managed by Mrs. Anna Mori. **(2) Anna Mori** has a Degree as “Interpreter and Translator”. In 1995 she started her activity as Technical and Legal Interpreter and Translator and as trainer for IT courses to adults and children, both in Italian and English. In 2002 she began her experience as “Board of Study and Teaching activity Manager” cooperating with the University of Genoa, Degree Courses in Pleasure Craft Engineering, Yacht Design and Engineering, Ship and Yacht Design. Thanks to this experience she developed her skills in professional vocational counselling, in placement strategies, in work experience organization, in development of skills related to the Blue Economy, in organizing training and education in Blue Economy sector, in the survey of Blue Economy shipyard and companies requirements in terms of training and human ressources. In 2012 she began her cooperation with DLTM as “Training and Education Manager”. She also deals with Post Degree Masters organization; she is the Managing coordinator of the “International School of Marine Technologies” (of which she has conceived the project). She cooperates in designing National and European Projects in the field of Training and Education. She is the coordinator of the Training and Education Work Group in the National Cluster “Trasporti Italia 2020”. |
| Best practices and/or success stories to share with the group | DLTM is carrying out projects (ERASMUS + and IT-FR Marittimo Programmes) and collaborations in Training and Education area, such as: Second Level Master FORTEMARE, International School of Marine Technologies (ISMT), European Researcher’s Night, work related internships for Secondary School students, hydrologist courses, oceanographic training courses on Italian Navy Training Ship Palinuro and Amerigo Vespucci. Second Level Master FORTEMARE in “System Engineering for Maritime Technologies” has been designed to meet the Training and Innovation requirements emerging from 9 R&D National Projects (Italian Law n. 297/1999) financed by the Italian Ministry of Scientific Research and Education (MIUR): RIMA; C3ISR, YSN, PERMARE, SWAD, ProDifCon, PYXIS, FluMarTurb. The Master is the result of a strong cooperation amongst University of Genova, Research centres, Industry and DLTM. It offers specialization in managing and optimization, design lifecycle planning and design strategies with specific skills concerning complex system management, risk analysis and decision-making.The recently established International School of Marine Technology (ISMT) is the meeting point between two worlds that are usually weakly correlated: **Industry and Education/Training Centres.** The aim of ISMT is to promote excellence in terms of know-how and expertise of industry, universities and research centres with updated and effective training activities in the field of marine/maritime technologies. This network includes several European and Italian Universities, private Companies and Research Centres. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Liguria Region hosts several scientific and industrial excellence centres active in the marine and maritime technologies domain. Universities and research centres are qualified by the involvement in international projects led by high-level researchers, while large companies and SMEs are widely oriented to innovation. Therefore, **they must improve the organization and identification of their requirements and, at the same time, overcome the lack of aggregation**. Liguria Region can rely upon the capacity of the local productive network to offer complex products, even innovative, through business groups and qualified human capital. **Difficulties** in technology transfer and cooperation among businesses requires to keep focus on the new and traditional opportunities offered by this context: * Liguria strategic geographical location is suitable to attract the development of specific economic activities (such as transport, logistic and port systems);
* development of new regional specializations in high-tech sector should be further improved;
* good attitude to **education** at high levels thanks to the educational offerings integrated with the research structures should be maintained;
* strategic role of R&I activities both at national and international level needs qualified HR.

There is also a need to improve the image of the maritime and marine sectors enhancing Ocean Literacy, which is more than just educating or informing the public and marine/ maritime stakeholders about the importance of the ocean. Ocean literacy, changing attitude and adopting a system approach, aims at facilitating the creation of an ocean literate society.Moreover DLTM could offer expertise on:* design of training and education activities in the Blue Economy sector also through the partnership of the International School of Marine Technologies;
* surveys to acknowledge the Blue Economy companies and Research Centres requirements in terms of human resources, training and upgrading (in compliance with the new technological trends);
* design of innovative and pragmatic professional vocational activities;
* data processing and mining(DLTM has cloud-based premises to host and process data, and could provide expertise on softwares and on-line survey forms (if required).
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| **Expert first name, last name** | **Jaap Gebraad** |
| Organisation, position | Foundation STC-Group, Board Secretary |
| Country | The Netherlands |
| Field of interest/ expertise/experience | Blue economy, skills development |
| Experience in skills and career development in the blue economy | The STC-Group is a worldwide operating educational and research institution for the shipping, logistics, transport and process industries. In the public domain the STC-Group offers preparatory vocational education (VMBO), senior secondary vocational education (MBO) and higher professional education (HBO) under the Dutch system. In the private domain it offers accredited master’s-level courses (fulltime and part time), business courses, training and consultancy.**Philosophy of education**While hearing and seeing leads to fleeting, temporary knowledge, doing and experiencing is what makes the difference in acquiring the right skills. The STC-Group is convinced that this approach works best. Students are only properly trained once they have attained the right combination of knowledge, skills and appropriate behaviour. This applies both to younger employees who are just starting out in their careers and to experienced workers looking to maintain their professional knowledge or advance their careers. The STC-Group therefore offers both knowledge transfer in the form of classes and coursework and a stimulating practical and simulation environment in which participants and students are given the opportunity to acquire substantial relevant experience.**International activities**Rather than limiting its scope to the Netherlands and Europe, the STC-Group actively shares its knowledge and experience with others all over the world. Our global network enables us to contribute significantly to the global labour market for transport in all its facets.In addition, Mr. Gebraad has been coordinating numerous projects related to the blue economy, as e.g. one project in the area of Blue Careers.Mr. Gebraad has been responsible for EU policies and funding since 2008, is coordinating several EU projects (like the Horizon 2020 project PROMINENT -www.prominent-iwt.eu) and is responsible for all applications submitted to the EU for funding requests. |
| Best practices and/or success stories to share with the group | Currently, a project is conducted in the area of Blue Careers to strengthen the connection between the field of work and the educational field, by creating the concept of hybrid lecturers for secondary vocational education and training. A hybrid lecturer is working 2 days a week for a company, and three days a week for a secondary vocational education and training institute. Another example is the fact that for the field of inland navigation, a strategy for harmonised education and training at a European level has been laid down, in which competencies have been laid down in a legislative proposal which is currently debated in the EU Parliament |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | The ever changing landscape of competencies needed and, for the longer term, the changing landscape of jobs. How can we prepare ourselves for the future, where the blue economy boosts skills and career prospects. In addition, since the blue economy is an international working environment, mobility and certification are areas to be addressed in conjunction with the skills forecasts/developments. |

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| **Expert first name, last name** | **Tine Viveka Westerberg** |
| Organisation, position | TVW competence, managerUniversity College of Southeast Norway, Asst. Professor |
| Country | Norway |
| Field of interest/expertise/experience | Skills and competence development, higher education for the blue economy, career development for young professionals |
| Experience in skills and career development in the blue economy | I have worked in higher education since 1998, focusing on the maritime, marine and oil and gas industries since 2002. I have extensive experience working with maritime and marine education and research, especially the internationalisation of these areas. I have worked in several InterReg-projects and has been part of various EU and international activities related to education and research on several maritime areas. I have extensive experience in cross-border cooperation. While working in the High North I was part of several international and circumpolar projects where the marine and maritime was central parts of the cooperation as they are both essential in Norway's economy. My main focus has been international study programs, internships and knowledge sharing across borders.While working for the Norwegian Shipowners' Association (NSA) I was one of three people responsible for the maritime research, education and training both onshore and onboard ships and rigs. I worked closely with the national stakeholders within maritime education and research, including the education and training institutions, national authorities and the maritime industry. I was a central part of creating a national strategy for lifelong maritime education and research - from apprentice to professor. I was the project manager for several national projects focusing on bringing the industry and the education and research providers closer together. I also worked on national recruitment campaigns for the entire maritime cluster. During my period in the NSA we also wrote a national research strategy for the maritime based on the input from the needs of the industry. This strategy is now adopted by the Norwegian government as the national research strategy for maritime.Currently I work in the maritime department of the University College of Southeast Norway where I both teach and is a project manager. The main focus now is the evaluation and restructuring of Norwegian maritime education and research. I am part of the maritime cluster organisation's competence committee, and has been so since 2007. I am continually working on improving the maritime education and making it more international. I work very closely with Liverpool John Moores University and am part of most of the EU-projects they've submitted the past year, including Blue Careers. We are also working with several of the maritime cluster organizations in the EU focusing on knowledge dissemination and knowledge creation. The main focus is maritime skills, and the current skills gap in the EU.I am currently researching "oceanauts" – the future competence needs for the maritime industry. |
| Best practices and/or success stories to share with the group | Projects that I have managed that the group could learn from are:Maritim karriere ([www.maritimkarriere.no)](http://www.maritimkarriere.no)) - improving the image and promoting the maritime industry for students in higher education.Maritime Trainee ([www.maritimtrainee.no)](http://www.maritimtrainee.no)) - an international cross-industry trainee program in the maritime industryGlobal Maritime Knowledge Hub ([www.marhub.no)](http://www.marhub.no)) - an industry program for chairing professors to take the maritime knowledge into the future.Also I participated in the work on the national research program for the blue economy – [www.maritim21.no](http://www.maritim21.no)  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | I think the main areas that the expert group should focus on lifelong learning for the blue economy. The EU members have different challenges in closing the skills gap, but I think the expert group must address this in a lifelong learning approach, and that the main focus within this is information and branding of the possibilities in the blue economy.I think that the maritime industry needs help promoting the almost endless possibilities that the digital shift and the transformation of the energy and transporations industries. We need to get young people interested in, enthusiastic about and to fall in love with the ocean!I also think that the group should look into how to contribute to recruit this new generation of problem-solvers for the blue economy. |

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| **Expert first name, last name** | **Halvor Mortensen** |
| Organisation, position | Val Videregående Skole (upper secondary school), project manager |
| Country | Norway |
| Field of interest/expertise/experience | Aquaculture, Integrated MultiTrophic Aquaculture, sustainability, vocational education |
| Experience in skills and career development in the blue economy | * Project lead for several projects focusing on cooperation between the aquaculture industry and educational institutes for work experience.
* Project lead for Erasmus+ partnership projects
* Development of local curriculum for new topics/subjects in vocational education (marine species/algae, aquaculture technician).
* Development of internet based course in macroalgae farming.
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| Best practices and/or success stories to share with the group | * How to cooperate at different educational levels and involving industry partners.
* How to use R&D as an integrated part of the education.
* The use of realistic/full scale facilities at school for training purposes.
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| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | * A wider look at the European aquaculture industry as a central part in the blue economy.
* Transnational cooperation focusing on observation and work experience.
* Updated view on the demand for education at different levels inside marine and maritime sectors in Europe.
* A common European understanding/recognition of skills and competence obtained during education at different levels.
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| **Expert first name, last name** | **Pawel Szymanski** |
| Organisation, position | Gdansk University of Technology, Faculty of Ocean Engineering and Ship Technology, Associate Professor |
| Country | Poland |
| Field of interest/expertise/experience | * Shipbuilding;
* Science and Technology;
* Construction and Operation of Machines;
* Power Engineering; Thermodynamics and Heat Transfer, the Technique of Thermal Systems and Energy Equipment;
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| Experience in skills and career development in the blue economy | • Professor of 5 courses at Faculty of Ocean Engineering and Ship Technology (Heat Transfer, Fundamentals of Machine Operation and Equipment, Probability and stochastic processes, Natural Resources, Seminar of selected issues related thematically to bachelor theses);• Assistant Professor of 4 courses at Faculty of Mechanical Engineering (Heat Transfer, Thermodynamics, Renewable Energy Resources, Fundamentals of Heat Technology); |
| Best practices and/or success stories to share with the group | I would like to share with a group a stories related to experience with teaching the Bachelor and Master level students at The Faculty of Ocean Engineering and Ship Technology and their career orienteering movements related to job hunting at the maritime sector. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | * recognition of formal and informal learning in maritime sectors,
* recognition of engineering skills in maritime sector,
* collaboration between research organisations, academia’s, students, and future experts with trade experts and business associations to meet the demands of the innovative maritime labour market
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| **Expert first name, last name** | **Rui Azevedo** |
| Organisation, position | Fórum Oceano, Secretary General |
| Country | Portugal |
| Field of interest/expertise/experience | Blue economy, skills development, ocean literacy |
| Experience in skills and career development in the blue economy | -Participation as expert in the project “Douro Inland Waterways 2020” (Analysis of skill gaps and design of a training strategy to support the development of inland waterways - Douro river);-Organisation of a set of workshops, with the involvement of members of the Portuguese Maritime Cluster, to debate skill gaps and training needs to support the development of Blue Economy in Portugal; - Participation in some projects and activities concerning ocean literacy addressed to young people such as “Sea Itinerant University”; |
| Best practices and/or success stories to share with the group | -In the field of Ocean Literacy Fórum Oceano is in charge of the animation of a working group (local authorities, associations, schools, universities,…) called “Jovens ao Mar” addressed to the exchange of experiences and good practices among the members; There are interesting experiences developed with the support of Fórum Oceano such as “Sea Itinerant University”, a cooperation project held under the responsibility of Porto University, Oviedo University and Escola Naval and “Centro de Mar” held under the responsibility of Viana do Castelo local authority, schools of the municipality and local associations. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | New training programs addressed to stress the challenges the marine and maritime sectors face in the future;Mobility and certification;Recognition of informal learningAttract young people to marine and maritime careers |

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| **Expert first name, last name** | **Alma Elena Alexandrov** |
| Organisation, position | ALMA TOURS, Manager |
| Country | Romania |
| Field of interest/expertise/experience | Blue economy, skills development, ocean literacy |
| Experience in skills and career development in the blue economy | **COASTAL DEVELOPMENT****SUSTAINABLE TOURISM****MARINE LITTER****PARTICIPATION WITH STAKEHOLDERS****EDUCATION AND AWARNESS****MICROPLASTICS** |
| Best practices and/or success stories to share with the group | Tourism is one of the less invasive industries. Tourism and nature are mutually dependent. Clean nature is attracting tourism and inevitably income. Big tourism volumes can damage nature if there is a lack of education, legislation, climate change, bad waste management, uncontrolled transportation, lack of monitoring and cleaning asn. We have already struggled to convince authorities at least to solve the problem of the waste management, but further steps should be taken. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Improvement of legislation, taking actions and getting more involved in public debates, improve and strength the efforts of education and raise awareness in changing attitudes and practices related to environment, awareness among stakeholders and consumers, better surveillance of the blue economy through a permanent communication between different stakeholders and economy branches. |

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| **Expert first name, last name** | **Lucía Fraga Lago** |
| Organisation, position | Coordinator of the training area at Technological Centre of the Sea – CETMAR Foundation |
| Country | Spain |
| Field of interest/expertise/experience | Coordinates the training area of CETMAR since 2002, devoted to the organization of training courses, development of training material and other formative and informative activities directed to the maritime-fishing sector and to CETMAR’s staff; Design, coordination and management of projects implying multidisciplinary teams and diverse collectives; activities related to the promotion of the life long learning and the innovation on the maritime-fishing sector; social communication of the science; Common Fisheries Police communication. (Interreg IIIA, IIIB; EQUAL II; E. S.F. article 6; Marie Curie Actions…)Trained as an oceanographer specialised on marine biology and aquaculture, she has participated in several fishing and oceanographic surveys, and realised training periods in Universities of Spain, France, Belgium and Portugal; she is fluent in Spanish – Castilian and Galician - , French, English and is an independent user of Portuguese and Italian. |
| Experience in skills and career development in the blue economy | Expert for the European Commission at the ESCO board (European Skills/Competences, Qualifications and Ocupations), on the reference group “Agriculture, Forestry, Fishery”. |
| Best practices and/or success stories to share with the group | Coordinates the Training Centre A Aixola for the Regional Ministry of the Sea since 2004. Aixola offers continuous training for maritime occupations in the areas of timber, composites, electricity and mechanics on-board, sails, pneumatic boats, net construction, and technical lastics (polyethylene and polypropylene). It also offers guidance for the creation of new businesses, job search, counseling, help with resumes and job placement. Trainings are non- academic, and are periodically adapted to the labour market needs and trainees demand.Aixola is committed to the maintenance and reservation of Galician Maritime heritage. |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Recognition of formal and informal learning, Improve the image of the maritime and marine sectorsIdentification of training needs for the better development of blue economy |

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| **Expert first name, last name** | **Francisco Caparros** |
| Organisation, position | Balearic Islands Employment Service (SOIB)Head of Unit for Employment policies evaluation, strategy and quality process |
| Country | Spain |
| Field of interest/expertise/experience | Blue economy, active labour market policies, skills development, economics |
| Experience in skills and career development in the blue economy | Employment expertise using a pool of employment policies such as career guidance, vocational education training (VET), job search assistance and promotion of entrepreneurship. Major area of interest is coastal tourism and lately shipbuilding and nautical maintenance. |
| Best practices and/or success stories to share with the group | Dual training systems addressed to unemployment youth tailored to nautical companies.Short Training courses based on Spanish Qualification Framework which is compatible with European Qualification Framework and promotes lifelong learning and career transitions |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Areas of benefit:1. Labour economics applied for development with special focus on employment policies2. External evaluator of Erasmus Plus 3. Career transitions using guidance systems and VETMajor issues are:1. Job and skills mismatch2. Undeclared work, precarious employment, temporality and partiality3. Transferability and recognition of skills in different contexts and EU countries |

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| **Expert first name, last name** | **FIDEL ECHEVARRIA** |
| Organisation, position | UNIVERSITY OF CADIZ, PROFESSOR |
| Country | SPAIN |
| Field of interest/expertise/experience | I am a Professor of Ecology at the University of Cádiz. My main field of research is related with the structure and dynamics of plankton communities, and with physical-biological interactions in the pelagic ecosystem. I have participated in more than 20 research projects, including european projects (i.e. CANIGO, OMEGA) and Networks of Excellence (EUROCEAN). Also I have participated in 15 oceanographic cruises, mainly in the area of Gibraltar Strait, Gulf of Cadiz and Alboran Sea, although I also participated in the circunnavigation expedition Malaspina 2010. I am author of more than 50 papers in scientific journals including papers in the most prestigious journals in science, as Nature, Science or PNAS. I have been supervisor of 15 thesis (2 PhD, 13 Ms) and coordinator of the workpackage dedicated to postdoctoral formation in Malaspina project.I have also experience in research management tasks and scientific policy. I was the first director of the Andalusian Center for Marine Science and Technology CACYTMAR (1999-2008). Also I was the coordinator in Spain of GLOBEC program (2003-2010), a program under the umbrella of IGBP dedicated to the study of the ocean’s role in global change. An important output of this period was the special volume of the Journal “Progress in Oceanography” entitled “Ecological functioning of the Iberian seas: a synthesis of GLOBEC research in Spain and Portugal” in which I participated as first guest editor (Echevarría et al. 2007). From 2008 to 2013, I have been the manager of the spanish Ministry for Marine Science and Technology Program, coordinating the evaluation of marine research proposals at the annual calls, and performing the follow-up of funded marine projects. Also I have represented the spanish government in european marine research programs as JPI-Oceans or SeasERA. I have participated in several scientific committes, including 3 evaluation pannels of Framework Program projects in Brussels. Also I was member of the Scientific Review Panel of projects EUROFLEETS and EUROFLEETS 2 and member of the scientific committee of the ASLO congress celebrated in 2015 in Granada (Spain). From 2014 I am the general coordinator of the International Marine Campus of Excellence CEIMAR, an aggregation of 14 institutions at the south of Iberian peninsula and north of Morocco with 7 Universities (coordinated by University of Cádiz, and including Universities of Almeria, Malaga, Granada, Huelva, Algarve and Abdelmalek Essaadi) and 7 research centers including CSIC and IEO. Finally I am the director of the International Doctorate school in Marine Studies EIDEMAR, a doctorate school with 5 doctorate programs covering most fields in marine and maritime research. Two of these programs have an european dimension: The program “Marine Science and Technology” is a joint program with the University of Ferrara, while the program “Marine Coastal Management” is a Erasmus mundus program involving 5 european Universities (Cádiz, Algarve, Aveiro, Bolonia, San Petersburg). “Marine Resources”, “Management and Conservation of the Sea” and “Maritime History and Archaeology” complete the offer of doctorate programs of the EIDEMAR doctorate school. |
| Experience in skills and career development in the blue economy | My main experience has to do with my position as director of the Doctorate school in Marine studies (EIDEMAR). |
| Best practices and/or success stories to share with the group | The main success story is related with the Campus of excellence of the sea (CEIMAR). The final evaluation done by an international committee, gave us the maximum score of A+, and gave us the recognition as a global campus of excellence.CEIMAR (campusdelmar.com) is an aggregation with 14 institutions (7 Universities and 7 research centres) all of them established in the South of the Iberian Peninsula (Spain and Portugal) and the North of Morocco. I am the General Coordinator of CEIMAR, an aggregation for science, innovation, transference, teaching, literacy and divulgation of marine and maritime issues. One of our main output has been the joint analysis performed with companies and industries about the opportunities for Blue Growth in the south of Spain. This analysis resulted in the book “Blue Economy in Andalucia”, a book that facilitated the incorporation of Marine and Maritime issues in the Research and Innovation Smart Strategy RIS-3 of our region Andalucia.CEIMAR is a cluster of research institutions with a very broad scope of activities. There are 6 main areas of specialitation: Knowledge of the sea, Resources from the sea, Management of the sea, Engineering of the sea, Cultural value of the sea, Human health and the sea. The three main axis of CEIMAR deals with (a) Teaching and talent atraction, (b) research and development, with emphasis in applied science closed to the production structures, (c) Divulgation, marine literacy and communication to the society.Taking this broad spectrum of interest and the number of institutions belonging to CEIMAR, I could represent different sectors of the blue economy at the two sea basins of CEIMAR: Atlantic and Mediterranean at both sides of the Strait of Gibraltar.  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | * Mobility
* Recognition of learning
* Improve the image of the sectors
* Facilitate the formation of clusters
* Get the academia closer to the real world
* Improve interdisciplinarity in formation.
* Improve the connection between academia and companies.
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| **Expert first name, last name** | **Ian Jenkinson** |
| Organisation, position | Board Member Mersey Maritime, Head of Maritime and Mechanical Engineering Liverpool John Moores University  |
| Country | UK |
| Field of interest/expertise/experience | Interest: Innovation and technology transfer, education and skills, public awareness of maritime and marine sector |
| Experience in skills and career development in the blue economy | Head of Maritime and Mechanical Engineering Liverpool John Moores University responsible for maritime and marine engineering education and professional training. Board Member of Mersey Maritime lead for cluster innovation and training initiatives through Liverpool Maritime Knowledge Hub.  |
| Best practices and/or success stories to share with the group | Maritime Skills project to develop sector wide apprenticeships using SMEs in the Liverpool and Hull Clusters. Mersey Maritime Liverpool Maritime Knowledge Hub initiative.  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Marine-maritime education and training (particularly in engineering), innovation and technology transfer, and industry-academic and transnational partnerships.  |

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| **Expert first name, last name** | **Iain Shepherd** |
| Organisation, position | Marine Systems Director – MARCOM DefenceChairman – Marine South EastChairman Advisory Council – National Oceanography Centre |
| Country | UK |
| Field of interest/expertise/experience | Skills for Blue Growth areasTraditional Maritime Skills (Afloat & Ashore) including Passporting across SectorsSTEMExperience in: Defence (Navy) / Oil & Gas / Shipbuilding / Port Sector / Fisheries & Equipment Manufacture  |
| Experience in skills and career development in the blue economy | Several Instructor Jobs in Royal Navy 1981 / 1987 – 1989Competency Monitoring Royal Navy 1989 – 1993Shipbuilding Qualifications Assessment – 1996 – 1998Offshore Training & Assessment (Subsea Operations) – 1997 – 1999 Overseas Navies Equipment Training – 2003Working on STEM & Blue Awareness – 2003 - Present |
| Best practices and/or success stories to share with the group | Introduction of Structured Training of Ex Naval Personnel into Oil & Gas ROV Operation to Improve Industry Safety and promote self-legislation.Impact of raising the awareness of young people to the vast array of marine and maritime career paths with Sea Vision and Others over last 13 years |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Passporting across sub-sectors, particularly common qualifications and Passporting.Raising awareness of opportunities for careers and removing sea-blindness. |

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| **Expert first name, last name** | **John Bostock** |
| Organisation, position | University of Stirling, Institute of Aquaculture, MSc Programmes Director. Also representing the European Aquaculture Technology and Innovation Platform.  |
| Country | United Kingdom |
| Field of interest/ expertise/experience | AQUACULTURE - Production technology; Sectoral Analysis; Innovation, Education and Skills Development |
| Experience in skills and career development in the blue economy | MSc level teaching and programme management for aquaculture and related subjects at the University of Stirling. Short course organisation for a variety of target groups ranging from early stage researchers to industry employees and government extension officers. Some occasional teaching at other European Universities.Active in the Erasmus Lifelong Learning Thematic Network for Aquaculture, Fisheries and Aquatic Resources Management (AQUA-TNET) as WP Leader (2005-2011) and Coordinator (2011-2014).Active in Leonardo da Vinci projects - Vocational Aqualabs (2009-2011) and Pescalex (2008-2011).Participant in EU FP7 AQUAINNOVA Project, Working Group on Knowledge Management.Responsible for coordinating Transnational Access to Aquaculture Research Infrastructures under the H2020 AQUAEXCEL2020 project. Participant in Erasmus+ Sector Skills Alliance “BlueEdu” on skills and career development in the marine cage-based aquaculture industry in Europe (2016-2018).Participant in the H2020 EURASTIP project in the Education workpackage, to build stronger collaborations between Europe and Asia in Aquaculture education (2017-2019).  |
| Best practices and/or success stories to share with the group | The Aqua-tnet network (2005-2014) played a major role in stimulating international collaborations in aquaculture and fisheries teaching with focus on areas such as generic skill needs and development, enabling mobility, encouraging innovation in teaching and developing digital teaching skills, lifelong learning pathways and recognition of prior learning. The project was documented in a special edition of Aquaculture International - <https://link.springer.com/journal/10499/23/3/page/1> and has a website archived at [www.aquatnet.com](http://www.aquatnet.com). In terms of organisational structure, the European Aquaculture Technology and Innovation Platform (EATIP) works through thematic areas with education and training placed within the wider context of sector knowledge management. This helps to link it into research and innovation, strategic human resources development and public communications (<http://www.eatip.eu/Default.asp?SHORTCUT=146>).  |
| Which areas do you think the expert group could provide benefit to? Which issues should be addressed? (e.g. mobility and certification, recognition of formal and informal learning, improve the image of the maritime and marine sectors, etc.) | Stimulation and fostering of interdisciplinary programmes to help strengthen cross linkages between industrial sectors within the blue economy. Greater emphasis and transparency on recognition of generic skills.Recognition of prior and informal learning Enhancing opportunities for mobilityStrengthening public understanding of blue sector science and industries |