JOURNÉES SCIENTIFIQUES DE L'UNIVERSITÉ DE NANTES

OCEANEXT

INTERDISCIPLINARY CONFERENCE

RISKS AND OPPORTUNITIES

IN MARINE

AND COASTAL

SOCIO-ECOSYSTEMS

8 • 9 • 10 JUNE 2016

LA CITÉ • NANTES

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Code Lutin · CRÉDIT MARITIME Le littoral a sa banque · l'Europe s'engage en Pays de la Loire · Nantes Métropole · Université du Maine · World Oceans Day · European Union

OCEANEXT

Wednesday, June 8, 2016

Grande Halle	8:30 am - 9:00 am	Check-in
ROOM 300	9:00 am - 9:45 am	Welcome speach
ROOM 300	9:45 am - 10:30 am	**Plenary session** **Transdisciplinary insights into Integrated Ecosystem Assessments: What they are, what they can be, what they should be** **DOROTHY DANKEL, University of Bergen**
Grande Halle	10:30 am - 11:00 am	Coffee break

ROOM 150

11:00 am - 12:45 pm	**A1 Coastal and marine management: uses, communities, planning (I)** **STEPHEN JAY**
11:00 - 11:30	› The Shifting Sea: Lively Space, Immersed Planning - *Stephen Jay, University of Liverpool*
11:30 - 11:45	› Fuzzy planning and soft spaces: Drawing up guidelines of a methodology to help the implementation of transboundary Marine Spatial Planning in the English Channel and the North Sea - *Romain Legé*
11:45 - 12:00	› Specificities of marine spatial planning in Tropical Areas - *Marie Bonnin*
12:00 - 12:15	› The Disparities Arising in the Policing of Consumptive and Non-Consumptive Marine Activities - *Danai Tembo*
12:15 - 12:30	› Behind the "Blue" of maps a hidden world: stakes for a "just sea" in the Marine Spatial Planning context - *Yannick Leroy*
12:30 - 12:45	› Discussion

ROOM 300

11:00 am - 1:00 pm	**B1 Oceans and human health: toxic and pathogenic organisms (I)** **MICHAEL DEPLEDGE**
11:00 - 11:30	› Do the Oceans really affect your health and wellbeing? - *Michael Depledge, European Centre for Environment and Human Health, University of Exeter Medical School*
11:30 - 11:45	› Early warning to reduce risks to human health due to toxic and pathogenic organisms - *Anouk Blauw*
11:45 - 12:00	› Human Enteric viruses in various environmental matrices in the Northwest of Morocco - *Laila Amar*
12:00 - 12:15	› Exposure to the Paralytic Shellfish Toxins (PSTs) producer Alexandrium catenella increases the susceptibility of the oyster Crassostrea gigas to pathogenic vibrios. - *Celina Abi-Khalil*
12:15 - 12:30	› Performances of a seawater desalination plant made up of a sand filter, ultrafiltration and reverse osmosis membranes during a planktonic bloom. - *Anthony Massé*
12:30 - 12:45	› Characterization of nematodes (Anisakidae) and their prevalence in most consumed fish in France sampled in North East Atlantic and Mediterranean Sea - *Véronique Verrez-Bagnis*
12:45 - 13:00	› Discussion

ROOM BC

11:00 am - 12:30 pm	**C1 Blue growth from marine bioresources and biotechnologies (I)** **JEAN FRANCOIS SASSI**
11:00 - 11:30	› Algal Biofuels on the verge of deployment: What's Left and What's Next ? - *Jean-Francois Sassi, Commissariat à l'Energie Atomique et aux Energies Alternatives*
11:30 - 11:45	› Algae within Galician farmlands: popular knowledge and science for sustainable development - *André Vicente Liz, David Fontán Bestilleiro*
11:45 - 12:00	› Geographical analysis for the integration of a microalgae production and biorefining unit in “Pays de la Loire" - *Céline Chadenas, Etienne Chauveau, Estelle Couallier*
12:00 - 12:15	› The emergent Multi-use Offshore Platform (MOP) concept : an real opportunity for offshore aquaculture - *Thomas Lockhart, Régis Baron, Denis Coves*
12:15 - 12:30	› Discussion

Grande Halle	1:00 pm - 2:00 pm	Lunch

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Wednesday, June 8, 2016

ROOM 150	2:00 pm - 4:00 pm	**A2 Coastal and marine management: uses, communities, planning (II)** **GILBERT DAVID**
	14:00 - 14:30	› Governance of marine protected areas and stakeholder participation, the social acceptance of the natural marine reserve of Reunion faced to the sharks' risk - *Gilbert David, UMR Espace pour le Développement*
	14:30 - 14:45	› How the coastal fishing industry can lead the recovery of an overfished stock? The example of the spiny lobster. - *Alain Menotti*
	14:45 - 15:00	› Fishermen perceptions regarding the establishment of a Marine Protected Area in Kuriat islands in Monastir (Tunisia) - *Marouene Mbarek*
	15:00 - 15:15	› The declining price anomaly in sequential auctions with asymmetric bidders - *Patrice Guillotreau*
	15:15 - 15:30	› The socio- economic space of marine fisheries as a tool of sociological understanding of actor games in the CFP - *Gilles Lazuech*
	15:30 - 15:45	› Coastal erosion in the south of Ouvea island (New Caledonia) : Contribution for an integrated coastal zone management. - *Olivier Cohen*
	15:45 - 16:00	› Discussion
ROOM 300	2:00 pm - 4:00 pm	**B2 Oceans and human health: toxic and pathogenic organisms (II)** **ALLAN CEMBELLA**
	14:00 - 14:30	› Spatio-temporal patchiness of harmful phytoplankton and associated toxins in two coastal embayments in the Ebro Delta (NW Mediterranean) - *Allan Cembella, Alfred Wegener Institute for Polar and Marine Research*
	14:30 - 14:45	› Research on azaspiracids - marine biotoxins adversely affecting the Irish shellfish industry - *Jane Kilcoyne*
	14:45 - 15:00	› Contribution à l'étude des microalgues épiphytes dans les eaux côtières du golfe de Tunis : Cas des espèces du genre Ostreopsis. - *Mohamed Amine Hachani*
	15:00 - 15:15	› Changes of paralytic shellfish toxins in gills and digestive glands of the cockle Cerastoderma edule under post-bloom natural conditions - *Maria João Botelho*
	15:15 - 15:30	› Microalgae blooms in the Channel - Watershed impact on toxic phytoplankton development - *Philippe Riou*
	15:30 - 15:45	› Removal of toxical microalgae and their toxins in artificial seawater by a combination of sand filtration / ultrafiltration and nanofiltration with the aim of drinking water preparation - *Maxime Pontie*
	15:45 - 16:00	› Discussion
ROOM BC	2:00 pm - 4:00 pm	**C2 Structure and function of intertidal mudflats** **KOEN SABBE**
	14:00 - 14:20	› The secret life of benthic microalgae in tidal flats - *Koen SABBE, Lab. Protistology & Aquatic Ecology, Ghent University*
	14:20 - 14:35	› Foraminifera and microphytobenthos responses to anthropogenic manipulation of a wild oyster reef - *Emmanuelle Geslin*
	14:35 - 14:50	› Microphytobenthos spatial distribution around oyster reefs: a remote sensing approach - *Caroline Echappé*
	14:50 - 15:05	› High spatial resolution perspectives on an intertidal mudflat food web - *Carl Reddin*
	15:05 - 15:20	› Hyperspectral imaging of the micro-algal diversity of oyster shells - *Anthony Le Bris*
	15:20 - 15:35	› How remote sensing methods developed for the monitoring of chlorophyll a in highly turbid waters can help to study the resuspension of microphytobenthos from intertidal mudflats? - *Morgane Larnicol*
	15:35 - 15:50	› Ecological status assessment in estuaries using diatom-based metrics: advantages, challenges and potential pitfalls - *Lourenço Ribeiro*
	15:50 - 16:00	› Discussion
Grande Halle	4:00 pm - 4:30 pm	Coffee break

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Wednesday, June 8, 2016

ROOM 150	4:30 pm - 5:30 pm	**FLASH PRESENTATIONS** **VERONIQUE MARTIN-JEZEQUEL, JUSTINE DUMAY**
	16:30 - 16:35	› A comparison of chitin purification performance of an enzymatic process on four crustacean cuticles - *Régis Baron*
	16:35 - 16:40	› Membrane filtration of microalga extract for recovering Polysaccharides: effect of the membrane characteristics and the ionic environment - *Nicolas Brodu*
	16:40 - 16:45	› Evaluating the potential of anaerobic digestate from urban wastewater for marine microalgae production. - *Hansy Haberkorn*
	16:45 - 16:50	› Preliminary metabolomic approach on structure of the bacterial community of the marine diatom Haslea ostrearia - *Florence Mondeguer*
	16:50 - 16:55	› Lithium selective extraction from old Tunisian sea waters using nanofiltration membranes - *Maxime Pontie*
	16:55 - 17:00	› Bacterial community structure of the marine diatom Haslea ostrearia - *Alexandra Lepinay*
	17:00 - 17:05	› Extraction of molecules from brown macroalgae Sargassum muticum by enzymatic hydrolysis improved by the use of surfactants - *Laurent Vandanjon*
	17:05 - 17:10	› Exopolymers recovery from culture supernatants of micro-algae using membrane techniques: fouling mechanisms - *Lisa Zaouk*
	17:10 - 17:15	› Bioguided fractionation of Gambierdiscus extracts - *Francesco Pisapia*
	17:15 - 17:20	› Development of a bacterial sensor for early detection of toxic algae bloom using synthetic biology techniques - *Cristóbal Aller*
	17:20 - 17:25	› How does varying photoperiod affect the physiology and toxicity of the diatom Pseudo-nitzschia? - *Amandine Caruana*
	17:25 - 17:30	› New Immuno-chromatography strips for the simple detection and quantification of the toxic marine microalgae, Alexandrium minutum - *Catherine Dreanno*
ROOM 300	5:30 pm - 7:30 pm	**Special Session: 3 MINUTES FOR COSELMAR**
ROOM BC	4:30 pm - 5:25 pm	**FLASH PRESENTATIONS** **BENOIT SCHOEFS, JUSTINE MARCHAND**
	16:30 - 16:35	› Metrology for supporting the reliability of oceanic measurements - *Daniela Stoica*
	16:35 - 16:40	› Genopoptaille project: moving stock assessment into the future - *Pascal Lorance*
	16:40 - 16:45	› Temporal dynamics of seagrass beds and microphytobenthos in Marennes-Oléron bay using time-series MODIS data. - *Astrid Lerouxel*
	16:45 - 16:50	› The OstreoRisk project: a multidisiciplinary approach to understand the impacts on human health of the Ostreopsis cf. ovata blooms - *Elisa Berdalet*
	16:50 - 16:55	› Biodiversity of dinoflagellates in the coastal waters of Kuwait - *Muna Husain*
	16:55 - 17:00	› Effects of climate change and eutrophication on domoic acid production by Pseudo-nitzschia species – context and objectives - *Nour Ayache*
	17:00 - 17:05	› Growth and biochemical responses of the benthic diatom Entomoneis paludosa (Bacillariophyceae) to dissolved inorganic and organic nitrogen in culture - *Thierry Jauffrais*
	17:05 - 17:10	› Growth and biochemical composition of a microphytobenthic diatom (Entomoneis paludosa) exposed to shorebird (Calidris alpina) droppings - *Thierry Jauffrais*
	17:10 - 17:15	› Light history effect in Haynesina germanica kleptoplast photoprotection mechanisms and PSII quantum efficiency - *Thierry Jauffrais*
	17:15 - 17:20	› The bulk fluorescein diacetate assay (FDA) as a technique for evaluating biotic impacts of crude oil to coastal sediments - *Edem Mahu*
Grande Halle	5:30 pm - 8:00 pm	Ice breaker and posters session

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Thursday, June 9, 2016

ROOM 300	**8:30 am - 9:15 am**	**Plenary session** **Tara Oceans: Eco-systems biology at planetary scale** **CHRIS BOWLER, Institut de biologie de l'école normale supérieure**

ROOM 150	9:15 am - 10:30 am	**A3 Coastal and marine management: uses, communities, planning (III)** **STEPHEN JAY**
	09:15 - 09:30	› Towards an ecosystem-based management approach at sea: The potential for cross-learning between maritime and terrestrial spatial planning - *Célia Le Lièvre*
	09:30 - 09:45	› "They dig deep squares", toilers of the sea vs defender of nature, facts and effects of environmental gouvernance - *Hélène Desfontaines*
	09:45 - 10:00	› Géoprospective as a research approach and as an empowerment lever. An experimentation on the fisheries of Bay of Biscay (France) - *Laurie Tissière*
	10:00 - 10:15	› Co-construction and assessment of fisheries management scenarii using the ISIS-Fish model within a geoforesight approach of coastal and marine Bay of Biscay socio-ecosystem - *Stéphanie Mahévas*
	10:15 - 10:30	› Discussion
ROOM 300	9:15 am - 11:00 am	**B3 From the ecology to the societal impact of harmful algae** **ELISA BERDALET**
	09:15 - 09:45	› Multidisciplinary and coordinating initiatives to prevent and mitigate the impacts of HABs - *Elisa Berdalet, Institute of Marine Sciences / Institut de Ciències del Mar, Barcelona*
	09:45 - 10:00	› Risk-Monitoring, Modelling and Mitigation (M3-HABs) of benthic microalgal blooms across the Mediterranean regions - *Rodolphe Lemée*
	10:00 - 10:15	› Citizen Participation in Observing Phytoplankton Seawater Discolorations - *Amelia Curd*
	10:15 - 10:30	› Mixotrophic cultures of Dinophysis sacculus and D.acuminata isolated from French coastal water - *Véronique Séchet*
	10:30 - 10:45	› GdR PHYCOTOX: an integrated research network on harmful algae from the ecology to societal impacts - *Hélène Hégaret*
	10:45 - 11:00	› Discussion
ROOM BC	9:15 am - 10:45 am	**C3 Climate change of coastal and marine socio-ecosystems: risks, mitigation and adaptation (I) - ALAN O'CONNOR**
	09:15 - 09:45	› Risk Analysis of Infrastructure Networks in Response to Extreme Weather including the Effects of Climate Change - *Alan O'Connor, Trinity College Dublin*
	09:45 - 10:00	› Modeling chloride transfer under climate change conditions. Contribution to the reliability assessment of service life for reinforced concrete structure - *Phu Tho Nguyen*
	10:00 - 10:15	› Scour and erosion investigation by jet erosion test and statistical analysis - *Didier Marot*
	10:15 - 10:30	› Impact of CO2 supply on the orientation of carbon metabolism in the diatom Phaeodactylum tricornutum - *Justine Marchand*
	10:30 - 10:45	› Discussion

Grande Halle	10:45 am - 11:15 am	Coffee break

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Thursday, June 9, 2016

ROOM 150	11:15 am - 1:15 pm	**A4 Case studies in ecosystem exploitation, assesment and management (I) - ANTONIO ALVAREZ ALONSO**
	11:15 - 11:55	› Systems engineering methods and tools for a sustainable exploitation of fisheries - *Antonio Alvarez Alonso, Grupo de Engenharia de Processos IIM*
	11:55 - 12:15	› Understanding the behavior of policy decision makers through participatory experiments, a role playing game to explore management of the Atlantic Bluefin tuna fishery - *Jules Selles*
	12:15 - 12:35	› Competition between a non-native cultured oyster and a commercially fished native oyster affects their trophic niche - *Nadescha Zwerschke*
	12:35 - 12:55	› Importance of rays and sharks for French fisheries and resulting fisheries impacts on populations - *Verena Trenkel*
	12:55 - 13:15	› Discussion
ROOM 300	11:15 am - 12:50 pm	**B4 Risk perception and risk management (I) DARREN LUMBROSO**
	11:15 - 11:45	› Use of an agent-based model to reduce loss of life from coastal flood events - *Darren Lumbroso, HR Wallingford*
	12:00 - 12:15	› A tool to locate potential death areas due to coastal flood: the V.I.E. Index - *Axel Creach*
	12:15 - 12:30	› Economic appraisal of vulnerability reduction scenarios to coastal flood risk: how to save human's life in spending less money? - *Axel Creach*
	12:30 - 12:50	› Discussion
ROOM BC	11:15 am - 12:45 pm	**C4 Climate change of coastal and marine socio-ecosystems: risks, mitigation and adaptation (II) - BENOIT SCHOEFS**
	11:15 - 11:45	› Phaeodactylum metabolism converges to phosphoenolpyruvate formation during growth under different light conditions - *Benoît Schoefs, MicroMar, Mer Molécules Santé*
	11:45 - 12:00	› Impact of Climate Change on Reliability of Electric Power Distribution Systems Subjected to Hurricanes in Coastal Regions - *Yue Li*
	12:00 - 12:15	› The effect of climate change on freeze-thaw durability of concrete structures in Finland - *Toni Pakkala*
	12:15 - 12:30	› Assessment of climate change effects on corrosion of harbour steel structures - *Emilio Bastidas-Arteaga*
	12:30 - 12:45	› Discussion
Grande Halle	1:15 pm - 2:15 pm	Lunch

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Thursday, June 9, 2016

ROOM 300	**2:15 pm - 3:00 pm**	**Plenary session** **Responsibly farming waters with an ecosystem - based approach and taking advantage of the ecosystem services provided by Integrated Multi - Trophic Aquaculture (IMTA) practices** **THIERRY CHOPIN, Canadian Integrated Multi-Trophic Aquaculture Network**
ROOM 150	3:00 pm - 5:00 pm	**A5 Case studies in ecosystem exploitation, assesment and management (II)** **ERIK OLSEN**
	15:00 - 15:40	› Ecosystem-based marine spatial planning; developments globally, and in the Northeast Atlantic - *Erik Olsen, Institute of Marine Research*
	15:40 - 16:00	› Integrated management in Irish estuarine and coastal systems - exploring potential pathways - *Christina Kelly*
	16:00 - 16:20	› ODEMM Pressure Assessment in the Celtic Seas. - *Debbi Pedreschi*
	16:20 - 16:40	› Managing fisheries in the context of an integrated marine policy: the importance of spatial issues - *Pierre Petitgas*
	16:40 - 17:00	› Discussion
ROOM 300	3:00 pm - 5:00 pm	**B5 New marine molecules** **MARCEL JASPARS**
	15:00 - 15:30	› PharmaSea: increasing value and flow in the marine biodiscovery pipeline - *Marcel Jaspars, Project Leader, PharmaSea EU FP7 Consortium, Marine Biodiscovery Centre, Department of Chemistry, University of Aberdeen*
	15:30 - 15:45	› Lipidomic approach to explore chemodiversity in Acremonium marine-derived strains - *Ana Camila Dos Santos Dias*
	15:45 - 16:00	› A Bioactive Bacterial Exopolyaccharide from Deep-Sea Environment: Modification, Characterization and Chondrogenic Potential for Cartilage Regenerative Medicine - *Agata Zykwinska*
	16:00 - 16:15	› Chemical characteristics and potential biological activities of a novel sulfated polysaccharide isolated from blue-green microalgae (Arthrospira platensis) - *Rafik Balti*
	16:15 - 16:30	› UPLC-MSE : a fast and convenient method for profiling phytoplankton metabolites : application to the identification of pigments and structural analysis of metabolites in Porphyridium purpureum. - *Laurent Picot*
	16:30 - 16:45	› Novel benzoyl analogs from the dinoflagellate Gymnodinium catenatum: importance of these emerging toxins in seafood safety regulatory programmes - *Lorena Durán-Riveroll*
	16:45 - 17:00	› Discussion
ROOM BC	3:00 pm - 4:05 pm	**C5 Risk perception and risk management (II)** **DENIS MERCIER**
	15:00 - 15:15	› Disease risk perception and management in Pacific oysters: the Farmer's story. - *Aurelie Castinel*
	15:15 - 15:30	› Adapting in the Anthropocene: a comparative case-study analysis of societal responses to mass mortalities of bivalves in coastal waters - *Sophie Pardo*
	15:30 - 15:45	› Oyster farming value chains in light of sanitary hazards - *Marie Catalo*
	15:45 - 16:05	› Discussion
Grande Halle	5:00 pm - 5:30 pm	Coffee break

OCEANEXT

Thursday, June 9, 2016

ROOM 150	5:30 pm - 6:30 pm	**A6 Coastal and marine management: uses, communities, planning (IV)** **GILBERT DAVID**
	17:30 - 17:45	› Between opening and endogenous logics, a more structuring organisation in the future with heritage-based regulations? The professional group of fishermen in traditional fishing - *Hélène Desfontaines*
	17:45 - 18:00	› The renewal of fishermen professional training. - *Pascal Guibert*
	18:00 - 18:15	› How to cope with hard working conditions in the fishing sector: artisanal fishermen and their wives - *Marie Charvet*
	18:15 - 18:30	› Discussion
ROOM 300	5:30 pm - 6:45 pm	**B6 Multidisciplinary researches in Marine Renewable Energy** **KATIE LYNCH**
	17:30 - 18:00	› Cost reduction in the offshore wind industry and sharing lessons across the offshore energy industries - *Katie Lynch, University College Cork*
	18:00 - 18:15	› Assessment of Hydrodynamic Loading based on Measurements of Marine Growth Shape and Roughness Characteristics Obtained from Stereo Imaging - *Michael O'Byrne*
	18:15 - 18:30	› Risk due to biofouling for offshore wind turbines: a multidisciplinary and probabilistic approach - *Hamed Ameryoun*
	18:30 - 18:45	› Discussion
ROOM BC	5:30 pm - 7:15 pm	**C6 Blue growth from marine bioresources and biotechnologies (II)** **JEAN FRANCOIS SASSI**
	17:30 - 17:45	› Determination of the biochemical composition of proliferative macroalgae by IR spectrometry - *Maureen Deniel*
	17:45 - 18:00	› Optimization of the hydrodynamics in a high volumetric productivity photobioreactor - *Charlène Thobie*
	18:00 - 18:15	› Seaweed liquefaction and R-Phycoerythrin recovery by the use of an ultrasound-assisted enzymatic hydrolysis process: The case of the alien Grateloupia turuturu - *Cécile Le Guillard, Justine Dumay*
	18:15 - 18:30	› Characterization of the lipid fraction of grinded stressed Parachlorella kessleri and formulation of a representative synthetic mixture, to initiate the study of lipids concentration by membrane filtration - *Erika Clavijo*
	18:30 - 18:45	› Enhancement of R-phycoerythrin extraction from Mastocarpus stellatus by the use of enzymatic hydrolysis - *Huu Phuoc Trang Nguyen*
	18:45 - 19:00	› Can microalgae biodiesel be a part of the solution to meet the sustainability objectives in transport sector in France by 2030 ? A range based Multi-Actor Multi-Criteria Analysis - *Gino Baudry*
	19:00 - 19:15	› Discussion
LES SALONS DU NANTILUS	8:00 pm - 11:00 pm	Gala Dinner

OCEANEXT

Friday, June 10, 2016

Bar 800	8:30 am - 9:00 am	Welcome coffee
Auditorium 800	**9:00 am - 10:00 am**	**Plenary session** **Facing the future: can foresight studies help to integrate science and stakeholders?** **LUC VAN HOOF, IMARES**
Bar 800	10:00 am - 10:30 am	Coffee break
Auditorium 800	10:30 am - 11:30 am	**ROUND TABLE MEETING:** **INFINITE FOOD SUPPLIES FROM THE OCEANS ?** How will the evolution of available resources affect the supply and demand for original products as well as the organization of the sectors involved (seafood, seaweeds and microalgae ...) ? Can the risks of food safety and security for these new products be anticipated? Is legislation a barrier to their development? *Participants : Coralie VERGARA (Biofortis Mérieux NutriSciences), Charles DELANNOY (Procidys), Jean-Pascal BERGE (IDmer), Thierry CHOPIN (Consul Honoraire de France Scientific Director, Canadian Integrated Multi-Trophic Aquaculture Network (CIMTAN))*
Auditorium 800	11:30 am - 12:30 pm	**ROUND TABLE MEETING:** **WHAT IS THE FUTURE FOR OFFSHORE AQUACULTURE ?** State of play at European and global level, and prospects for the Atlantic shoreline Perspectives on biology , technological innovation , regulation and social acceptability *Participants : Philippe Goulletquer (IFREMER), Philippe Glize (SMIDAP), Thomas LOCKHART (DCNS), Laurent BARILLE (Université de Nantes, MMS)*
Sous-mezzanine	12:30 pm - 1:30 pm	Lunch
Auditorium 800	1:30 pm - 2:30 pm	**ROUND TABLE MEETING:** **CHALLENGES IN MARINE RENEWABLE ENERGY** Second shoreline in the world, and with the need to develop renewable energies, France has a potential and a historic opportunity to use marine energy. The period 2025-2035 will pave the way for a production away from the coast . What challenges for logistics, technologies and management? *Participants : Pierre WARLOP (WPD Offshore), Cédric LEBOEUF (Université de Nantes, CDMO, IUML, Human Sea), Hervé BACHELOT LALLIER ((Directeur du Département ATLANTIQUE INGENIERIES, BPBA), Franck SCHOEFS (Conseiller EMR, Université de Nantes, GeM, IUML)*
Auditorium 800	2:30 pm - 4:00 pm	**ROUND TABLE MEETING:** **SHARING OUR COASTS AND OCEANS** Maritime spatial planning policy in France : strategic documents on the shoreline Which role for each stakeholder facing socio-economic, environmental and territorial issues ? *Participants : Christophe LE VISAGE, ex chargé de mission au Secrétariat Général de la mer, François VICTOR, chef de la Mission de Coordination des Politiques de la Mer et du littoral (MCPML) à la DIRM NAMO, Damien PERISSE, directeur en charge des affaires maritimes, de l'innovation et de la compétitivité et du suivi de la Commission Mer Baltique de la CRPM*
Auditorium 800	4:00 pm - 4:20 pm	Round table meeting : Overall debate
Auditorium 800	4:20 pm - 4:35 pm	Conclusion speech

DOROTHY DANKEL,

Bergen University, Norway
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Dorothy J. Dankel is an early career researcher with an interdisciplinary marine science background.
Dankel's current work demonstrates an interdisciplinary framework to analyze the networks of scientists and policy-makers in marine Integrated Ecosystem Assessments. Dankel strives for new thinking in the marine sciences, including integration of the humanities into long-term management plans.

Her vision is a research and teaching platform on the topic of science for policy that is inter-faculty and integrated in European universities. Such work could inspire and fuel *salient transdisciplinary research* on societal needs and grand challenges, also aiding the university's contract with society.

Conference Presentation Abstract :

Transdisciplinary insights into Integrated Ecosystem Assessments: What they *are*, what they *can be*, what they *should be.*

Integrated Ecosystem Assessments are scientific frameworks that synthesize data to inform policy decisions. Today many science institutions develop and conduct Integrated Ecosystem Assessments as the integral tool of ecosystem-based management. However, the scholarship on the role of Integrated Ecosystem Assessments in policy and how these assessments can or cannot spur political actions remains at best fragmented, and the actual use of Integrated Ecosystem Assessments in policy processes is not fit for purpose.

The state-of-the-art of Integrated Ecosystem Assessments is pointing strongly in the direction of a push towards a "technological lock-in" where quantitative modelling is the method of choice. Experiences show that once a technology process is locked-in, any efforts to reform will be an uphill battle (i.e. the use of gas-powered automobiles for personal transport). If Integrated Ecosystem Assessments are to be designed for high credibility, legitimacy and societal saliency, a combination of quantitative and non-quantitative disciplines needs to be integrated *early-on* in the process. Since a common framework for Integrated Ecosystem Assessments in Europe is still lacking, there is an urgency to define how they should work to reach the transdisciplinary potential with an impact on sustainable actions. How can procedures for Integrated Ecosystem Assessments, the core tool linking the implementation of policy objectives and knowledge for marine ecosystem-based management, be designed to be credible, legitimate and salient?

In her Keynote address, Dorothy Dankel will outline some insights learned from collaborative projects in Responsible Research and Innovation (RRI) and provide a new interdisciplinary examination of how Integrated Ecosystem Assessments are currently conducted. In addition, she will demonstrate how Social Network and Cultural Consensus Analyses with linguistic methods, gender perspectives and philosophy of science can be applied to carefully examine and analyze Integrated Ecosystem Assessments.

CHRIS BOWLER

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He is a research director at the CNRS and has been in charge since 2010, of the environmental and evolutionary genomics section at the biology Institut in the Ecole Normale Supérieure in Paris. (iBENS, CNRS/ENS). Since 2009, he has been one of the scientific coordinator for the *Tara Oceans* expedition and one of the scientific directors of *Tara Oceans Polar Circle*.

Chris Bowler is an expert in plant biology and has been recognized by the CNRS silver medal in 2010. In his lab, this scientific has studied the marine diatoms and unicellular photosynthetic protists, major parts of the plankton, that play a primary role in the marine ecosystem life.
Thanks to many samples collected on board Tara during the *Tara Oceans* expedition, Chris Bowler is making an attempt to identify the distribution and the role of diatoms in the oceans around the planet. He, thus, tries to collect the reactions of an organism, that is at the start of the food chain for many marine species, against climate changes.

Conference Presentation Abstract: **TARA-OCEANS: Eco-systems biology at planetary scale**

The ocean is the largest ecosystem on Earth and yet we know very little about the plankton that drift within. To increase our understanding of this underexplored world a multidisciplinary consortium, Tara Oceans, was

formed around the 110-ft research schooner Tara, which sampled plankton at more than 210 sites and multiple depth layers in all the major oceanic regions during expeditions from 2009-2013.

The presentation will describe the first foundational resources from the project (based on a first data freeze from 579 samples at 75 stations; see Science special issue May 22, 2015) and their initial analyses, illustrating several aspects of the Tara Oceans' eco-systems biology approach.

The project provides unique resources for several scientific disciplines, capturing biodiversity of a wide range of organisms that are rarely studied together, exploring interactions between them and integrating them with environmental conditions to further our understanding of life in the ocean and beyond in the context of ongoing climate changes.

THIERRY CHOPIN

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Dr. Thierry Chopin is presently Professor of Marine Biology at the University of New Brunswick in Saint John.

Dr. Chopin's research focuses on the ecophysiology, biochemistry and cultivation of seaweeds of commercial value and the development of Integrated Multi-Trophic Aquaculture (IMTA) systems for environmental sustainability (nutrient biomitigation and other ecosystem services, and green technologies for improved ecosystem health), economic stability (improved output, product diversification, risk reduction and job creation in coastal communities) and societal acceptability (better management practices, improved regulatory governance and appreciation of differentiated and safe products).

Dr. Chopin is the Scientific Director of the Canadian Integrated Multi-Trophic Aquaculture Network (CIMTAN), an interdisciplinary strategic network of the Natural Sciences and Engineering Research Council of Canada (NSERC).

Conference Presentation Abstract: **Responsibly farming waters with an ecosystem-based approach and taking advantage of the ecosystem services provided by Integrated Multi-Trophic Aquaculture (IMTA) practices**

Aquaculture will play an increased role in tomorrow's food production systems. However, the Blue Revolution needs to become the greener Turquoise Revolution by developing innovative technologies and practices with increased environmental sustainability, economic stability and societal acceptability, such as Integrated Multi-Trophic Aquaculture (IMTA).
With IMTA, farmers cultivate species from different trophic levels with complementary ecosystem functions in proximity. They combine fed species (*e.g.* fish and shrimps) with extractive species (*e.g.* seaweeds, aquatic plants, shellfish and other invertebrates) to take advantage of synergistic interactions among them, while biomitigation takes place.
The IMTA concept has many variations adaptable to open-water and land-based systems, marine and freshwater environments, and temperate and tropical climates.
A major rethinking is needed regarding the functioning of an "aquaculture farm". Having to deal with different nutrients (small particulate organic nutrients, large particulate organic nutrients and dissolved inorganic nutrients), different spatial and temporal recapturing strategies should be designed. This will certainly trigger a need for changes in regulations, as they were designed without IMTA in mind in most countries.
There is a renewed interest in the mariculture of seaweeds for their integrated cultivation, the ecosystem services they provide (*e.g.* nutrient biomitigation, oxygen provision, carbon sequestration, reduction of ocean acidification, etc.) and novel uses. The value of the ecosystem services provided by extractive species should be recognized, accounted for and used as financial and regulatory incentive tools (*e.g.* nutrient trading credits). The IMTA multi-crop diversification approach could be an economic risk mitigation and management option to address climate change impacts.
Perceptions should change: nutrients are not necessarily wastes and recycling, encouraged on land and in agriculture, should also be at sea and in aquaculture.
Business models should embrace the emerging Integrated Sequential BioRefineries (ISBR) concept to manufacture diverse products for a wide variety of applications.
Humans will soon not be able to continue thinking of mostly land-based agronomic solutions for securing their food, nor for providing many other derived products, but will have to turn, increasingly, to responsible aquanomy to manage their "aquatic fields".

LUC VAN HOOF

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Luc van Hoof has built up experience as a fisheries economist and management consultant during 15 years in various African countries. Since 2000 he has been involved in European and Dutch fisheries research, both as head of the Fisheries Research Group of the WUR Agricultural Economics Research Institute and as head of the Seafood and Aquaculture group of IMARES.

Currently his main task lies in developing a framework for integrated marine management, governance and marine spatial planning. He is employed by the Institute for Marine Resources and Ecosystem Studies (IMARES) in the Netherlands. He is working at the WUR Environmental Policy Group on Institutional change in Fisheries Management. Luc van Hoof is member of the board of MARE, Centre for Marine Research, and is Executive Secretary of EFARO, the European Fisheries and Aquaculture Research Organisation. As member of both EFARO, MARE, EAFE, the EU Scientific, Technical and Economic Committee for Fisheries (STECF) and observer of the EU North Sea Regional Advisory Committee, he is well known among the stakeholders of the fisheries scientific, management and fisheries sector community.

Conference Presentation Abstract: **Facing the future: can foresight studies help to integrate science and stakeholders?**

Feeding the world population by 2050 (and providing them with sustainable energy and jobs) is one of the main challenges of today; especially in the light of the scarcity of fresh water a marine or blue revolution is needed to feed 10 billion people by then. The marine environment surely offers a lot of opportunities, but the seas and oceans and the marine ecosystems are also under threat of unsustainable uses.

Central question in this is how we can attain sustainable use of ecosystem services, including the governance of marine and coastal areas**.** In the world of today the role and position of science in this process is rapidly changing. In order to meet the challenge of the future we need a more applied form of science in a trans-disciplinary way in which knowledge is being produced together with stakeholders in a complex field of responsibilities. So not only is an interdisciplinary mode of producing science of importance, the more crucial issue is that of entering a mode of co-creation of knowledge together with stakeholders such as the industry, NGOs, policy makers and civic society.

In his Keynote address Luc van Hoof will examine how the method of foresight studies can be used to reach a multi-disciplinary/interdisciplinary and participatory process of formulating answers to the challenges of the future. He will base his analysis on the experiences he gained in two participatory foresight studies in the field of fisheries, aquaculture and sea food processing he facilitated in recent years: the 2007 FEUFAR project and the 2014 COFASP project; and the development of five scenarios for alternative governance models for regional cooperation under the ODEMM project in 2014.

OCEANEXT

KEYNOTE SPEAKERS

Antonio Alvarez Alonso IIM-CSIC, Vigo

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Session A4: Systems engineering methods and tools for a sustainable exploitation of fisheries

Professor Antonio Alvarez Alonso obtained his doctorate in Chemical Engineering in 1993.
Prof. Alonso's research focuses in the area of (bio)process engineering, namely regarding the mathematical modelling and computer-aided simulation, optimization and control of bio-systems, unit operations and processes in the bio-industries (food and biotechnology).
He is one leader of (Bio)Process Engineering Group – IIM-CSIC (Vigo, Spain).
Prof. Alonso has published around 120 articles, 6 book chapters and many conference papers.
Its position within IIM a marine research institute allowed him to have a particular attention for fishing and seafood sector. He concentrated, among others, on the management of unwanted bycatch and discarded fish species both on processing on-board and in-land.
In this context, he coordinated the European FAROS life project (http://www.farosproject.eu/) after BEFAIR project.

Elisa Berdalet, Institut de Ciències del Mar (CSIC) of Barcelona

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Session B3: Multidisciplinary and coordinating initiatives to prevent and mitigate the impacts of HABs

Since 2009, Elisa Berdalet is Deputy Director of the Institut de Ciències del Mar (CSIC) of Barcelona. Her global objective is to understand how the structure, dynamics and physiology of microplankton are modulated by physico-chemical processes from small to meso spatio-temporal scales as well as ecological interactions. In particular, this objective is addressed to the understanding of the dynamics of harmful algal blooms, integrating field studies in the NW Mediterranean and ecophysiological research in the laboratory. At present, her main research is focussed on the blooms of the benthic toxic dinoflagellate Ostreopsis and their impacts on human health.

Allan Cembella, Alfred Wegener Institut for Polar and Marine Research

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Session B2: Spatio-temporal patchiness of harmful phytoplankton and associated toxins in two coastal embayments in the Ebro Delta (NW Mediterranean)

Allan CEMBELLA is head of the Ecological Chemistry team of the Alfred Wegener Institut for Polar and Marine Research. His research interests include phytoplankton ecophysiology, chemical and molecular ecology of marine protists, plankton species interactions in marine food webs and Harmful Algal Bloom research (SCOR-IOC GEOHAB Steering Committee. He is also involved in a number of key working groups such as the IOC Intergovernmental Panel on Harmful Algal Blooms (he is the German delegate), the ICES WG on Harmful Algal Bloom Dynamics and the WG on Marine Microbial Biotechnology.

Gilbert David, IRD

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Session A2: Governance of marine protected areas and stakeholder participation, the social acceptance of the natural marine reserve of Reunion faced to the sharks' risk

Director of research at IRD (UMR 228 Espace Dev), G David leads a research team devoted to the integrated approach of Nature and Society. After a PhD at the University of Brest on the fishing system and food security in Vanuatu (South Pacific), he joined IRD in 1991 to investigate the spatial rebalancing of New Caledonia. Since 1997, he studied marine protected areas and integrated coastal zone management of the Indian Ocean Commission's member countries. Since 2004 he is member of the Commitee program WIOMSA. From 2005 to 2009, he coordinated one of the programme of the Coral Reef Initative for the Pacific devoted to the relationships between the watershed and the coral reefs. Since 2011, he is based in the Montpellier Remote sensing center. He continues to study the coral reef as an ecososciosystem. He has recently put the focus on the social acceptance and governance of marine protected areas faced to the territory dynamics.

Michael Depledge, University of Exeter

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Session B1: Do the Oceans really affect your health and wellbeing?

Professor Michael Depledge holds the Chair of Environment and Human Health at the University of Exeter Medical School. He is a former Commissioner of the Royal Commission on Environmental Pollution and former Chief Scientist of the Environment Agency of England and Wales. Professor Depledge's research interests include the impact of climate change on health and wellbeing, the effects of chemical body burdens on human health and the environment, and finding ways of communicating scientific information to policymakers and politicians Professor Depledge has published more than 380 peer-reviewed scientific papers in leading international journals and books. In recognition of his major scientific contributions to the fields of comparative toxicology and medical toxicology he was awarded a Doctor of Science (DSc) degree by the University of London (1996) and the Poulsson Medal of Honour by the Norwegian Society of Pharmacology and Toxicology (2009).

KEYNOTE SPEAKERS

Marcel Jaspars, University of Aberdeen
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Session B5: Increasing value and flow in the marine biodiscovery pipeline

Marcel Jaspars is Professor of Organic Chemistry, Director of the Marine Biodiscovery Centre and PharmaSea project leader, at the University of Aberdeen. Research in the Jaspars group focuses on the functions and applications of natural products, particularly those from marine organisms. The goal of the work is to determine the biological role of selected natural products as well as using them as pharmaceuticals and tools for biomedical research. The core skills in the group are natural product isolation and structure determination using spectroscopic methods.

Stephen Jay, University of Liverpool
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Session A1: The shifting sea: lively space, immersed planning

Dr. Stephen Jay is lecturer in Marine and Environmental Planning, at the School of Environmental Sciences, University of Liverpool. He is a co-founder of the Marine Spatial Planning Research Network. Stephen's marine planning interests focus on the institutional arrangements being put in place, especially in European nations. He is currently involved in a number of marine planning projects and advisory work. He is also exploring more theoretical aspects of this new endeavour, such as tracing the conceptual origins of marine planning and the interpretation and representation of space in these initiatives. Stephen has carried out research projects into the development of offshore wind energy in the UK and other European countries, and into the newly emerging systems of marine spatial planning.

Darren Lumbroso, HR Wallingford
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Session B4: Use of an agent-based model to reduce loss of life from coastal flood events

Darren Lumbroso is Principal Engineer at HR Walingford. He specialises in flood risk management, hydrology, water resources management and emergency management for flooding. Darren is a Chartered Engineer, a Member of the Institution of Civil Engineers (MICE) as well as a Member of the Chartered Institution of Water and Environmental Management (MCIWEM), Member of the British Hydrological Society and a Member of Registered Engineers for Disaster Relief (REDR). He has recently carried out research into emergency management for floods and flash flood hydrology in France funded by a Global Research Award from the Royal Academy of Engineering.

Katie Lynch, University College Cork
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Session B6: Cost reduction in the offshore wind industry and sharing lessons across the offshore energy industries

She's research engineer since 2009 in Beaufort Research (previously Hydraulics and Maritime Research Centre), in University College Cork in offshore renewable energy research on a number of projects:

- EU FP7 MARINA Platform project : A 4.5 year project looking at the feasibility of combined wind and ocean energy platforms in terms of technical feasibility through physical and numerical modelling, economic and risk assessment, site resource assessment and grid integration. She contributed to the work in all of these areas and aided in the management of the critical component design work package.
- EU FP7 ORECCA project: A 1.5 year project providing a pre-feasibility study of combined offshore wind and ocean energy platforms. She aided in managing the work on site selection and GIS development.
- Ocean Energy projects: Her role includes various ocean energy projects including tank testing and analysis of wave energy concepts.

Since 2013, she was involved in the development of the consortium and proposal for an Eu FP7 project in offshore wind logistics: LEANWIND is a new 4 year project developing technological innovations and tools to improve offshore wind logistics and provide cost reductions.
She's leading the work in economic and market analysis and will aid in the coordination of the project.

Alan O'Connor, Trinity College Dublin
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Session C3: Risk Analysis of Infrastructure Networks in response to extreme weather including the effects of climate change

Dr. Alan O'Connor is an Associate Professor in the Dept. of Civil Engineering at Trinity College Dublin, Ireland. He is also a Chartered Engineer and Fellow of the Institution of Engineers of Ireland. He has extensive national/international experience in infrastructural risk analysis and probabilistic safety assessment. Dr. O'Connor is a co-founder and Director of Roughan O'Donovan Innovative Solutions - RODIS (www.rodis.ie). RODIS is a subsidiary company of Roughan & O'Donovan Consulting Engineers (ROD) specialising in complex and innovative structural and bridge engineering solutions for the international market.

KEYNOTE SPEAKERS

Erik Olsen, IMR Bergen, Norway
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Session A5: Ecosystem-based marine spatial planning; developments globally, and in the Northeast Atlantic

Erik Olsen is the head of the Demersal Fish Research group at the Institute of Marine Research, in Bergen, Norway. Erik has worked primarily on issues related to ecosystem-based monitoring, assessment and management. Erik was deeply involved in the development and groundwork for implementing the Norwegian Integrated Management plans, first for the Barents sea, then the Norwegian sea and finally the North Sea. Linking core monitoring, stock-assessment and advisory activities with the development of ecosystem-based management and understanding how this science-based advice feeds into the socio-ecological systems we manage is the focus of Erik's current research.

Koen Sabbe, Ghent University
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Session C2: The secret life of benthic microalgae in tidal flat

Koen Sabbe is Professor of Marine Ecology. His PhD research dealt with the taxonomy, ecology, biodiversity and biogeography of the nematofauna associated with tropical and cold-water coral structures. His research main topics held in Biogeography, Microbial ecology and Marine ecology. He is currently involved in the BIANZO II project. The main topics for his research in the Antarctic are ecology (esp. trophic position) and biodiversity of the Antarctic meiobenthos, in particular in the context of global change.

Jean-François Sassi, CEA Cadarache
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Session C1: Algal Biofuels on the verge of deployment: What's Left and What's Next?

Jean-François Sassi is a R&D Manager - 3rd Generation biomass (Algae Processes & Technologies) at CEA - Commissariat à l'énergie atomique et aux énergies alternatives (France). He is also Expert Scientific Evaluator for the European Research Agency (European Commission, H2020 & COSME programs). He is a chemist with 25 years of experience in applied industrial R&D in an international context. He has hands-on experience in structuration and management of innovation projects, teams of researchers and technological transfer. Jean-François Sassi is an expert in plant- and algae-based biofuels, chemistry and applications, fractionation, purification and transformation by physicochemical and biotechnological routes.

Benoît Schoefs, Université du Maine, France
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Session C4: Phaeodactylum metabolism converges to phosphoenolpyruvate formation during growth under different lights conditions

Dr Benoît Schoefs is professor in Plant Physiology at the School of Sciences and Technology, University of Le Mans. He is the leader of the MicroMar research group of the laboratory Mer Molécules Santé. Research in the Benoît group focuses on the regulation of carbon reorientation in microalgae under stress and applications. The goal of the work is to elucidate the molecular, biochemical and cellular mechanisms involved in this biological and use this knowledge in applications. These include the the production and extraction of valuable compounds and their utilisation in nutrition and health problems. The team is currently involved in a number of advisory work and research projects including European and oversea partners.

WELCOME TO THE OCEANEXT CONFERENCE!

The OCEANEXT conference will bring together key scientists and stakeholders from **multi-disciplinary** areas of research around the **sustainable use of ecosystem services and governance of marine and coastal areas**.

The conference will be held in English. However during the 3rd day (10 June 2016), round table discussions will be held in french. To ensure the smooth running of round table discussions, interpreters will be present and translation receptors will be distributed.

Have a great time in Nantes!

Special Session: 3 minutes for COSELMAR
Wednesday 8th June, 17h30 - Room 300

COSELMAR researchers are engaged in extension work of the scientific results of the program.
In this context, we organize a special session: 3 minutes for COSELMAR.
This performance, in French language, will be filmed.

9 pairs of researchers, 9 results of COSELMAR: 3 minutes to popularize their scientific results!
The jury and the public will vote for the best performance.
Jury members: Elisa Berdalet (CSIC, Spain), Alan Cembella (AWI, Germany), Thierry Chopin (UNB, Canada), Gilbert David (IRD, France), Stephen Jay (UL, England), Koen Sabbe (UG, Belgium) and Jean-François Sassi (CEA, France).

Do not miss the show and come and vote for the best team!
Vote: https://b.socrative.com/login/student/
Room name: OCEANEXT

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Check for updates and news on the website: https://oceanext.sciencesconf.org/

More info on COSELMAR program: http://www.coselmar.fr