

**The International Cooperation and Development Forum  
on Marine Economy 2021**

*Hosted by Shenzhen Municipal People’s Government  
Organized by Shenzhen SEZ Construction and Development Group Co. Ltd.  
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**The Ritz-Carlton, Shenzhen, 25-26 November 2021**

**"Leadership for the Sustainable Expansion of the Marine Economy"**

*As of 6 October 2021*

<b>Thursday 25 November 2021</b> <b>14:00 - 21:00</b> Shenzhen time	
13:15 - Ongoing	<b>Registration of participants</b>
14:00 - 14:30	<b>Official opening ceremony</b> Speech by government leaders and representatives of overseas senior guests.
14:30 - 15:40 <b>Plenary 1</b>	<b>How can China deepen its participation in global ocean governance and expand its role in the global ocean economy? What areas for priority attention?</b>  China's 14th Five-Year Plan (2021-2025) Report has put the emphasis on deepening China’s involvement in global ocean governance. At the same time, the priority remains to increase the share of marine activities in the overall economy. However, despite the very significant progress achieved in the last few years, China’s ocean development continues to face a number of issues and challenges. What will be needed in the coming years for China to strengthen its role as a global blue economy player and what kind of initiatives could showcase the country as an active participant in global ocean governance rules-setting?

	<ul style="list-style-type: none"> <li>✓ What could accelerate the development of China’s marine economy and increase its role in the global Blue economy? How to move faster with emerging, high-tech, marine industries to replace traditional ones?</li> <li>✓ How to develop China's marine resource utilization efficiency which remains below that of the US, Germany or the UK?</li> <li>✓ When looking at the experiences of the last five or ten years what is the most important initiative to be taken to significantly improve the efficiency of global ocean governance?</li> <li>✓ What initiatives could China develop - or be more actively involved in - to address the governance issues relating to new opportunities generated by disruptive technologies for increasing value-creation from the world’s oceans? How to address issues of transparency, ownership, and equity?</li> <li>✓ Existing global marine governance frameworks do not adequately ensure the protection and sustainable use of biodiversity in high-seas areas. What could help accelerate the negotiation of a new international agreement to achieve this priority?</li> </ul>
<p>15:50 - 17:00 Plenary 2</p>	<p><b><i>What Government policies and corporate initiatives in China and at the international level to achieve long-term sustainability for the ocean economy?</i></b></p> <p>The 14th Five Year Plan has introduced, for the first time, the notion of sustainability regarding marine economy in a five-year plan document. This concept has now become crucial, as a fast-expanding ocean economy means increasing pressure on marine resources and ecosystems already affected by a very serious deterioration of their condition. The dramatic increase of plastic pollution has become a major threat to ocean ecosystems, as well as issues such as overfishing as almost 90% of global marine fish stocks are fully exploited, over-exploited, or depleted according to the Food and Agriculture Organization (FAO). How to better leverage transformative ocean science and technology solutions for a more sustainable development? What is required for achieving long-term sustainability in areas such as distant waters fishing or protection of blue diversity?</p>

	<ul style="list-style-type: none"> <li>✓ What actions can blue economy companies take to transform their value chains, moving towards circular, less resource - and waste - intensive business models to help achieve long-term sustainability?</li> <li>✓ What priority actions for a Biodiversity Strategy for the conservation of marine ecosystems and the restoration of those which have been degraded to ensure the sustainability of ocean resources?</li> <li>✓ What can be done to achieve an international agreement against overfishing while ensuring fair revenues for the fishermen and the fishing industry?</li> <li>✓ A sustainable ocean economy requires adequate financing of the policies and actions needed to achieve that goal. How could corporations, government and international organizations coordinate financing resources to that end?</li> <li>✓ What corporate actions and government policies for the long-term sustainability of the coastal environment as China and other countries develop coastal tourism as a significant source of growth?</li> <li>✓ In the last ten years the ocean resources sustainability has been a major concern for experts and academic but was not a major public issue. What lessons could be drawn to define the actions needed to accelerate the development of public awareness and involvement on this issue?</li> </ul>
<p>17:10 - 18:15 <b>Plenary 3</b></p>	<p><b><i>Building Shenzhen as a global marine center</i></b></p> <p>Despite the fact that Shenzhen’s marine industry is smaller in size than Shanghai’s, the city has been slated to become a global ocean center city. And it has a number of great attributes and assets for becoming a major global hub for blue economy activities given its geographical location, its long coastline, its very strong technological innovation capabilities which have already made it a global high-tech center, its close integration in the global economy and its academic resources. What actions are required to leverage more optimally city's assets, create new capabilities and resources to establish the Shenzhen bay area as a global hub for the blue economy – and thus have the city make an even larger contribution to China’s overall economy?</p>

	<ul style="list-style-type: none"> <li>✓ How the central government decision to turn Shenzhen into a 'core engine' of reform to power growth and innovation could contribute to position the city as a global hub for the Blue economy?</li> <li>✓ What actions to increase Shenzhen attractiveness as a global Blue economy hub in the face of well-established competitors such as Shanghai, Hong Kong, Singapore, Hamburg or London?</li> <li>✓ A global ocean center city requires the presence of a well-developed, sophisticated, financial services industry? What should be done to develop this sector in Shenzhen?</li> <li>✓ How to create more synergies between Shenzhen's dynamic high-tech sector and the city's ocean activities – thus strengthening its position as a pioneer and innovative hub?</li> <li>✓ What actions to establish a thought leadership positioning on the Blue ocean economy for the city?</li> <li>✓ Looking at the spectacular development of Shenzhen in the last ten years or so, what lessons to be drawn to ensure an even more efficient expansion of the city in the coming years?</li> </ul>
18:15 - 19:15	<b><i>Dinner Time</i></b>
19:15 - 20:00 <b>Plenary 4</b>	<p><b><i>A better Blue economy? Look at the mysteries of the oceans</i></b></p> <p>Although oceans represent more than 70% of our planet and are crucial for the weather, for fighting climate change and are a major source of economic activity and food supplies, among other things, 80% of the ocean's surface remains unexplored and we still have a lot to discover about oceans' secrets and dynamics. Moving towards a better knowledge of the oceans will be crucial for achieving a truly long-term sustainable Blue economy.</p> <ul style="list-style-type: none"> <li>✓ What are our current capabilities to better explore the seas? What are the challenges? How will technology take us further in deciphering the still mysterious dynamics of the oceans?</li> <li>✓ What are the unforgettable stories and experiences in discovering some elements of the mysteries of the oceans?</li> <li>✓ What do we learn from the wonderful interactions between humans and marine life?</li> </ul>

	<ul style="list-style-type: none"> <li>✓ More and more people want to participate in marine-related activities, such as sailing, regattas, deep-sea expeditions, etc. How to use this growing interest to create the necessary respect for the ocean ecosystems and their importance?</li> </ul>
20:15 - 21:00 <b>Plenary 5</b>	<p><b><i>The new generation of Blue economy entrepreneurs</i></b></p> <p>A number of startups founders are now beginning to leverage the potentialities of disruptive technologies to create new products and services that will contribute to making Blue economy activities not only more productive and profitable but also more sustainable. Who are these entrepreneurs? What are the emerging success stories? How could they contribute to help other Chinese Blue economy companies become more competitive and integrate into an open, competitive, innovative, inclusive, marine civilization?</p> <ul style="list-style-type: none"> <li>✓ Innovation in the marine economy sectors is seen as more financially risky than in other domains. How to ensure that Blue economy entrepreneurs can have access to the funds needed to develop their projects?</li> <li>✓ The government provides a number of advantages for young innovators, like small security loans and training programs. How private sector VCs look at the Blue economy activities? Where do they see the greatest potential for successful projects?</li> <li>✓ How can Blue economy entrepreneurs use the new awareness about the importance of the oceans and their resources to promote the progress of Chinese society, help build a better environment, and develop a consensus on shared values?</li> </ul>
<p><b>Friday 26 November 2021</b> <b>08:45 - 18:30</b></p>	
08:00 - Ongoing	<b><i>Registration of participants</i></b>
08:45 - 09:55 <b>Plenary 6</b>	<p><b><i>Unleashing the full business opportunities of the Greater Bay area</i></b></p> <p>The Outline Development Plan for Guangdong HK Macao Greater Bay Area aims to transform the Pearl River Delta from the factory of the world to a global center for high-tech manufacturing, technological innovation, financial services, trade transport and logistics.</p>

	<p>The nine cities plus Hong Kong and Macau comprising the Greater Bay Area combine the assets and business proposition of providing a strong manufacturing base, very significant high-technology capabilities, academic and scientific resources and the attractiveness of global tourism and leisure centers. The whole area also benefits from the gigantic infrastructure developments of the last few years which have considerably reduced travel time between the different centers of the area.</p> <ul style="list-style-type: none"> <li>✓ How can businesses and local governments create additional synergies to develop the region into a major center for technology and innovation?</li> <li>✓ What additional actions are needed to make of the region a major financial services center – especially considering the opening up of financial services to foreign companies?</li> <li>✓ What steps to further coordinate the development of a favorable business environment between three different legal systems, economic structures, tax systems and currencies.</li> <li>✓ As the Greater Bay Area becomes even more urbanized and connected what policies are required to ensure a coordinated sustainable development of the whole region as a key success factor to attract talent and high added value activities?</li> <li>✓ What are the lessons when reviewing the economic development of Great Bay Area in the last decade? What new opportunities will the further integration of the Greater Bay Area region provide to businesses?</li> </ul>
<p>10:05 - 11:10 <b>Plenary 7</b></p>	<p><b><i>Developing a viable ocean energy supply chain</i></b></p> <p>With the goal endorsed by all the signatories of the Paris Climate accords to fully decarbonizing the power sector renewable energy deal making is now steadily increasing as companies, utilities, and governments prepare to meet climate targets. Consolidation is likely to occur across the ocean renewable energy value chain. Offshore wind development – and especially floating offshore wind - holds a great potential, with oil and gas companies increasing their investment in this domain. In the same way, the potential from tidal and wave energy is just beginning to be leveraged. Technological developments, new business models and sector consolidation are on the verge of reshaping the global offshore renewable energy sector.</p>

	<ul style="list-style-type: none"> <li>✓ How to expand floating wind farms to make them a major part of the future of green electricity?</li> <li>✓ What could be done to accelerate the development and use of robots, A.I. and sensing technology to lessen the impact of the expansion of offshore renewable energy on the oceans' ecosystems?</li> <li>✓ As Chinese companies accelerate the installation of offshore wind turbines in view of the carbon neutrality goal set for 2060, how to ensure the profitability of their projects with the end of national subsidies scheduled for the end of this year?</li> <li>✓ What is needed to accelerate the development of technological innovations in China's ocean energy industry, beyond initiatives such as the Special Funds for Marine Renewable Energy ?</li> </ul>
<p>11:20 - 12:20 Plenary 8</p>	<p><b><i>The technological innovations that will impact on the development of the marine economy in the next five to ten years</i></b></p> <p>From Advanced Materials to Biotechnology, from sensors and imaging to autonomous systems and big data analytics, several disruptive technologies are already beginning to have a transformational impact on the marine economy. In many countries the scientific and business communities are now increasing efforts to look at innovative approaches to optimize the impact that all these technologies will have on the development of every sector of the ocean economy. This involves among other things a more integrated approach to understanding the oceans; the search for technology synergies, the need for academia and business to promote a new culture of education and skills.</p> <ul style="list-style-type: none"> <li>✓ Recycling technologies offer tremendous potential for new business and for oceans' ecosystems preservation. What could be done to develop existing technologies and develop new ones?</li> <li>✓ Seaweed and algae offer tremendous potential for new applications in sectors such as pharmaceuticals, food, cosmetics, crop nutrition/bio-fertilizers, bio-packaging etc. What government and business actions to develop China's great potential in this domain?</li> </ul>

	<ul style="list-style-type: none"> <li>✓ How to leverage digitalization and big data technology, machine learning and AI to increase the efficiency and productivity of the aquaculture sector?</li> <li>✓ How to accelerate the development and implementation of autonomous shipping technology to increase efficiency and reduce the environment footprint of the shipping industry?</li> <li>✓ The deep-sea is a large source of marine biogenetic resources (MGR) and has become a growing area of research. We are still at a preliminary phase in being able to leverage its use for new pharmaceutical products and food resources. What is the status in terms of knowledge of the biogenetic engineering potential of the deep-sea? What are the main challenges in developing the different applications already emerging?</li> <li>✓ Satellites provide much more information on the evolution of the seas that could be obtained just from the surface. They can tell us a lot about submarine topography, sea surface temperature, sea levels changes, coral reefs, and they can help track the movement of pieces of plastic in the ocean. How to optimize the use of satellite data and services for managing better oceans and coasts?</li> </ul>
12:20 - 13:30	<b><i>Lunch break</i></b>
13:30 - 14:30 <b>Plenary 9</b>	<p><b><i>Winning the war for marine talent</i></b></p> <p>In the last few years China has been setting up a number of institutes and other academic centers devoted to the formation of talents in ocean-related and Blue economy domains. How can the government and related organizations connect with enterprises to help them cultivate and select high-quality talents? If Shenzhen wants to build a global ocean center city, it must innovate to attract global talent.</p> <ul style="list-style-type: none"> <li>✓ What kind of talents and skills will the Blue economy need to sustain high growth in the coming years?</li> <li>✓ How to incentivize talented young people to acquire the skills that will open the doors to high added value employment positions in the Blue economy?</li> <li>✓ What measures to support innovation and startups creation in the ocean economy domain?</li> </ul>

	<ul style="list-style-type: none"> <li>✓ How to move from creating the strong technical and engineering skills to producing a new generation of problem-solvers and innovators for the Blue economy?</li> </ul>
<p>14:40 - 15:40 <b>Plenary 10</b></p>	<p><b><i>The Blue economy in the global post Covid recovery</i></b></p> <p>Blue economy sectors such as travel and coastal tourism, shipping, fisheries and seafood production have been badly hit by the Covid 19 pandemic. However, as some sectors of the ocean economy are expected to register a growth rate which is double the growth rate of the global economy targeted investments and incentives policies in these sectors could not only help accelerate the pace of economic recovery but also reinforce the protection of ocean ecosystems.</p> <ul style="list-style-type: none"> <li>✓ The Post-Covid recovery with the new emphasis on green energies and carbon neutral activities could increase the role of the Blue economy as a growth driver and a key factor in the fight against climate change. How could businesses fully implement circular economy processes to accelerate the development of green marine activities?</li> <li>✓ According to a study, one third of investments in the blue economy could be unsustainable by 2030. What government policies and corporate actions to make financial players shift investments towards activities that preserve the ocean and ensure long-term growth?</li> <li>✓ What new investments in the Blue economy would have the greater and faster impact in boosting sustainable long-term economic growth?</li> <li>✓ How to address the present shortcomings in the financing of a Post-Covid Ocean economy – such as the higher risk profile of ocean investments or the shortage of investible projects with appropriate deal size and risk-return ratios?</li> <li>✓ Looking at the developments of the Blue economy in the last ten years, what lessons can be drawn to ensure an even faster integration of the technologies to accelerate the expansion of this sector and increase its share of in China’s overall GDP?</li> </ul>
<p>15:50 - 16:50 <b>Plenary 11</b></p>	<p><b><i>Restoring the ocean environment as an urgent imperative</i></b></p> <p>Over half of China’s population resides along the coast and the coastal areas account for about 60% of the country’s GDP. China –</p>

	<p>like all coastal nations – has suffered from the decline of the ocean environment degradation due to the rapid development of the marine economy and the increase in the rejection of pollutants of all kinds – especially now plastic pollution. However, there has been a growing awareness about the need to restore and protect the ocean environment and a convergence is emerging between local governments, industries, the financial sector and academia to focus on the ocean environment preservation. This was illustrated last June, as China, marked this year's World Oceans Day with the emphasis on protecting marine biodiversity and raising public awareness on the need for harmonious coexistence between humankind and nature.</p> <ul style="list-style-type: none"> <li>✓ What initiatives to involve more Chinese corporations in marine environment protection activities? How to leverage the growing trend toward adoption of ESG standards?</li> <li>✓ What additional regulations are needed to tighten the protection of the ocean environment?</li> <li>✓ How to create synergies and coordination between government policies, communities and business involvement and academia research to develop efficient actions for restoration and conservation of the ocean environment?</li> <li>✓ What actions could help enhance the public ecological awareness with respect to ocean environment protection?</li> <li>✓ How to improve China's management of waste and plastics entering the Oceans to ensure a drastic reduction from present levels?</li> </ul>
<p>17:00 - 18:15 <b>Plenary 12</b></p>	<p><b><i>2030 and beyond: The road to a carbon neutral Blue economy</i></b></p> <p>Major changes in ocean economy activities are crucial to help achieve carbon neutrality not only with respect to these activities as a very significant contribution to reaching overall global carbon neutrality, but also to protect and restore the oceans' ecosystems which until now have played a major role in capturing and sequestering organic carbon created by human activities. This buried "blue carbon" has resulted in a significant limitation of the level of total carbon emissions; but the degradation of marine ecosystems is now reducing the capacity of capturing and burying this "blue carbon". So, the days of huge ocean vessels, propelled by high fossil fuel consumption</p>

	<p>engines are numbered. Other marine industry activities are facing the same increasing pressures and new regulations to reduce the marine industry’s CO2 footprint and move towards carbon neutrality. Wind, solar electric, and hydrogen-powered ships and new technologies introduced in the development of other marine industries activities are beginning to provide innovative low- or no-carbon alternatives.</p> <ul style="list-style-type: none"> <li>✓ Global shipping is the world’s sixth carbon emitter. What is the potential of hydrogen and ammonia-based fuel to achieve carbon neutral shipping? Where do we stand with the technology? What could be the possible timeline?</li> <li>✓ How to leverage innovative finance to speed up the evolution towards a carbon neutral Blue economy?</li> <li>✓ What regulatory reforms are needed to promote best practices in climate-adaptive fisheries management, including a shift from harmful subsidies to incentives for industry adoption of carbon neutral technologies and practices?</li> <li>✓ What should be done to develop Blue Carbon as the basis for a new industry, which means the development by companies of seagrasses, mangroves and tidal marshes plantations that will capture carbon to be traded - as carbon trading emissions markets are developing in many countries including China.</li> <li>✓ How to develop the crucial role that Blue biotechnology can play to create plant-based alternatives to plastics and other petrochemical applications, thus reducing carbon emissions?</li> <li>✓ As China is launching its national carbon market companies will be facing new constraints and pressures to set net zero carbon emission targets. How will corporate leaders prepare to carry out carbon accounting, transform and upgrade their process and technology, implement energy-saving and emission reduction projects?</li> </ul>
18:15 - 18:30	<b><i>Concluding remarks: What we take home</i></b>