



# **Australia India Indo-Pacific Oceans Initiative Partnership Dialogue**

on

Indo-Pacific Oceans Initiative (IPOI):  
Strengthening International Cooperation

organised by

**Centre for Public Policy Research**

in collaboration with

**Monash University, Australia**

supported by

**the Department of Foreign Affairs and  
Trade (DFAT), Australia**





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## ABOUT CPPR

CPPR is an independent public policy think tank with a mission to conduct and promote high-quality evidence-based research and training; provide government bodies, private organisations and academic institutions with practical and innovative recommendations; and influence decision-making, with the objective of delivering actionable ideas that could transform society.

## ABOUT AIIPOI

Prime Minister Modi first articulated the “Security and Growth for All in the Region” doctrine for the Indian Ocean region in March 2015. Subsequently, he announced the Indo-Pacific Oceans Initiative (IPOI) at the East Asia Summit (EAS) held in Bangkok, Thailand on 4 November 2019.

And on 4 June 2020, during Leaders' Virtual Summit, India and Australia announced “Australia-India Comprehensive Strategic Partnership”, and agreed to work together bilaterally, regionally and multilaterally, and in minilateral arrangements, to support regional architecture in line with their shared values and interests. Among the many initiatives under the Strategic Partnership, the Australia-India Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific is a noteworthy development and Australia-India Indo-Pacific Oceans Initiative Partnership (AIIPOIP) has emerged as the flagship programme. It is supported by the Department of Foreign Affairs and Trade (DFAT), Government of Australia. The AIIPOIP aligns with other bilateral arrangements, including Australia-India Maritime and 2+2 Dialogues, and with Australia's cooperation with ASEAN under its Outlook on the Indo-Pacific.

The Monash University, Melbourne and the Centre for Public Policy Research (CPPR), Kochi are working on a year-long project, under the AIIPOIP supported by DFAT, Government of Australia, exploring maritime cooperation in the Indo-Pacific region focussing on the following: a) Trade Connectivity and Maritime Transport: Smart Ports and Digital Supply Chains, b) Marine Ecology Strategies (with a particular emphasis on Marine Plastic Litter and Debris regulatory waste minimisation models and strategies in the Bay of Bengal), c) Convergences between the Vision-Outlook-Initiative of the Indo-Pacific countries/groupings, i.e. ASEAN, Australia, and India.

## PROGRAMME SCHEDULE

### PROGRAMME

21 April 2022 [Thursday]

0900-1300 hrs IST Briefings and Visits

1600-1730 hrs IST IPOI Scholars Connect - Roundtable Conference

**Chair: KV Thomas, Senior Fellow (Internal Security & Extremism) CPPR**

### Participants

1. **Mr Alif Imran Hidayat**, Researcher, Maritime Institute of Malaysia, Malaysia
2. **Ms Amruta Karambelkar**, Research Associate, Vivekananda International Foundation, India
3. **Dr Eric Frécon**, Adjunct fellow at IRASEC (Research Institute on Contemporary Southeast Asia, Bangkok), IRSEM (Institute for Strategic Research, Paris) and at the French Naval Academy-Sorbonne
4. **Dr Harisankar K Sathyapalan**, Assistant Professor at the School of Legal Studies, Cochin University of Science and Technology (CUSAT), India and Research Fellow, Centre for Public Policy Research (CPPR)
5. **Prof. (Dr) Kitti Prasirtsuk**, Professor of Political Science, Thammasat University, Thailand
6. **Mr Lucio Blanco Pitlo III**, Research Fellow at the Asia-Pacific Pathways to Progress Foundation, Philippines
7. **Dr Mukund V. Narvenkar**, Assistant Professor, School of International and Area Studies, Goa University, India
8. **Mr Him Raksmeay**, Research Fellow, Cambodian Institute for Cooperation and Peace, Cambodia
9. **Mr Siswanto Rusdi**, Founder-Director, The National Maritime Institute, an independent Maritime Think Tank in Jakarta, Indonesia
10. **Dr Vu Hai Dang**, Senior Research Fellow at Centre for International Law - National University of Singapore

**Inaugural Session :** 1830 hrs IST to 1935 hrs IST

**22 April 2022 [Friday]**

0830 -0950 hrs IST

**Session 1: Exploring Convergences on IPOI: ASEAN, Australia, India**

**Chair: Vice Admiral M P Muralidharan, AVSM & Bar, NM (retd.), Distinguished Fellow, CPPR, Kochi**

**Speakers:**

1. **Dr W Lawrence S Prabhakar**, Advisor, CPPR, India
2. **Dr Sali Bache**, Strategic Advisor at the ClimateWorks Centre, Australia
3. **Dr Vo Xu an Vinh**, Deputy Director General, Institute of SouthEast Asian Studies (ISEAS), Vietnam Academy of Social Sciences, Hanoi, Vietnam

Q&A and discussion

Conclusion

0950 - 1005 hrs IST - **Tea/Coffee Break**

1005 - 1125 hrs IST

**Session 2: Marine Litter and Debris in the Bay of Bengal**

**Chair: Prof (Dr) S Bijoy Nandan**, Professor, Department of Marine Biology, Microbiology and Biochemistry & Dean, Faculty of Marine Sciences, Cochin University of Science & Technology (CUSAT)

**Speakers:**

1. **Mr Gerry Nagtzaam**, Associate Professor , Monash University, Australia
2. **Dr Salom Gnana Thanga Vincent**, HOD, Department of Environmental Sciences, Kerala University
3. **Ms Akansha Tiwari**, Wildlife Filmmaker

Q&A and discussion

Conclusion

1125 - 1140 hrs IST - **Tea/Coffee Break**

1140 - 1310 hrs IST

### Session 3: **Smart Ports and Supply Chains in the Indian Ocean**

**Chair: Dr Vijay Sakhuja, Hon Distinguished Fellow, CPPR**

#### **Speakers:**

1. **Dr Andrew D Mitchell**, Professor, Faculty of Law, Monash University and Affiliate Fellow, CPPR
2. **Capt Martin A. Sebastian**, Former Centre Head and Senior Fellow, Centre for Maritime Security and Diplomacy, Maritime Institute of Malaysia (MIMA)
3. **Dr R P Pradhan**, Associate Professor, Dept. of Humanities & Social Sciences, BITS Pilani Goa Campus and Distinguished Fellow, CPPR
4. **Dr Prashant Bhaskar**, Director, National Centre for Ports & Shipping, Australian Maritime College

Q&A and discussion

Conclusion

1310 - 1350 hrs IST - **Lunch**

1350 - 1500 hrs IST - **Plenary Session**

**Chair: Dr T V Paul**, James McGill Professor of International Relations in the Department of Political Science at McGill University, Montreal, and a Fellow of the Royal Society of Canada.

#### **Speakers:**

1. Remarks by **Amb Venu Rajamony IFS (retd.)**, Officer on Special Duty (in the rank of Chief Secretary), External Cooperation at Government of Kerala, Professor of Diplomatic Practice, O.P Jindal Global University, Former Ambassador of India to the Netherlands, and Advisor, CPPR.
2. Remarks by **Dr Sinderpal Singh**, Assistant Director, Institute of Defence and Strategic Studies (IDSS), RSIS, Singapore
3. Remarks by **Dr Joshua Thomas**, Former Deputy Director of the ICSSR North Eastern Regional Centre, Shillong & Coordinator, ASEAN Studies Centre, Ministry of External Affairs, Government of India, Shillong and Erudite Distinguished Fellow.
4. DFAT representative

Conclusion

1500 - 1515 hrs IST - **Concluding Remarks and Vote of Thanks**

**Dr Reetika Syal**, Senior Officer, Research, CPPR

## SPEAKERS PROFILE

### Session 1: Exploring Convergences on IPOI: ASEAN, Australia, India



#### **V Adm MP Muralidharan, AVSM & Bar, NM**

Vice Admiral M P Muralidharan, is an alumnus of National Defence Academy and a Post Graduate in Defence Studies, with a career of close to four decades in the Indian Navy. He has commanded three warships, been Flag Officer Commanding Maharashtra and Gujarat Naval Area, Commandant of the Indian Naval Academy, Chief of Personnel of the Navy and the Director General of the Indian Coast Guard, from where he retired in 2013.

Post retirement, the Admiral was a Member of the Armed Forces Tribunal for four years, an appointment equivalent to a High Court Judge. He is a regular writer in professional journals and a speaker at seminars on Strategic and Maritime Affairs.

The Admiral was awarded the Ati Vishist Seva Medal (AVSM) twice by the President of India and is also a recipient of the Nao Sena Medal (NM).



#### **Dr W Lawrence S Prabhakar**

Dr W Lawrence S Prabhakar is an author, researcher & professor of International Relations & Strategic Studies. His major publications include: Growth of Naval Power in the Indian Ocean Region: Dynamics and Transformation (New Delhi: National Maritime Foundation, 2016), Maritime Security in the Indian Ocean Region: Critical Issues of Debate (New Delhi: Tata-McGraw Hill 2008). He was also a fellow at the Center for Naval Analyses, Alexandria Virginia June-July 2001 USA. His other research assignments have been with the Asia-Pacific Center for Security Studies, Honolulu, Hawaii, Research School of Pacific and Asian Studies, Australian National University, Canberra, Australia. He has been published in leading journals.

## ARTICLE SYNOPSIS

### **The Convergent Identity formation of the Idea of the Indo-Pacific: ASEAN, Australia and Indian Perspectives**

Security convergence based on identities and formation of identities is a vital aspect of growing regional relations among states and powers. The transforming contexts of the Indo-Pacific now witness two persistent trends of neorealist pursuit of the power quotient of great power rivalries as well as the constructivist identity formation of emerging partnerships. While the rise of China and its assertive claims in power, territorial disputes and the quest for regional hegemony has been quite pronounced, there has also been the quest for converging ideas and identities of cooperation and convergence in the Indo-Pacific that builds stronger accents of peace, stability, and security through a variety of such instrumental factors.

The Indo-Pacific in the longer haul is demanding that each state and regional actor envisage an Indo-Pacific Outlook that is premised on security, ecology, resources, capacity building and resource sharing, disaster risk reduction and management, science, technology and academic cooperation and trade connectivity and maritime transportation. These instrumentalities provide for greater convergence and enduring partnerships among the states and the regional actors.

ASEAN, Australia, and India have been in dialogue and have strengthened the accents of the Indo-Pacific along these lines of convergence. In fact, there has been a triangular convergence of the three actors strengthening the Indo-Pacific partnerships as each actor's security and economic interest is in increasing alignment with the other.

The essay would endeavour to - a) analyse the issues of convergence of the three actors of the Indo-Pacific outlooks and identify the similarities and scope for cooperation; b) identify the areas of capacity-building among the three actors to promote the Indo-Pacific convergences; c) examine common interests among the three actors that would go into reinforcing the partnerships.



### **Dr Sali Bache**

Dr Sali Bache is Strategic Advisor at the ClimateWorks Centre, a think-tank embedded within Monash University, and is an associate with the University of Tasmania's Institute for Marine and Antarctic Studies. She has worked for over two decades across climate policy and oceans governance in advisory, diplomacy and research roles. Sali has worked with and consulted to regional and international bodies including APEC, the OECD, the IUCN and various UN agencies. Her current work focuses on marine inclusions under the Paris Agreement, and the growing interface between countries' strategic and climate agendas and investments.

## **ABSTRACT**

The Bay of Bengal is significant in terms of both climate and maritime strategic and resource interests. Its location holds growing geo-strategic importance; it is one of the largest marine ecosystems of the world, and one of the most climate impacted areas. These issues and opportunities combined make it an area of heightened interest in regard to the overlap between environmental and conventional maritime security considerations, and the potential for sustainable blue economic growth. Potential for littoral states to capitalise on the environmental and prosperity opportunities whilst ensuring the strategic security dimensions of the Bay of Bengal, will be significantly impacted by decisions and implementation of a number of multilateral regional initiatives. Of particular interest in this regard is the growing role of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).



### **Dr Vo Xuan Vinh**

Deputy Director General, Institute for Southeast Asian Studies (ISEAS Vietnam), Vietnam Academy of Social Sciences (VASS), Hanoi. He joined the ISEAS as a researcher in 2004. He presented his PhD thesis on ASEAN in India's Look East Policy in 2011. His research interests lie in security, politics

and international relations in Southeast Asia, the South China Sea dispute, and India's Look East/Act East Policy. His latest book: India, Vietnam and the Indo-Pacific: Expanding Horizons. London and New York: Routledge- Pankaj K Jha and Vo Xuan Vinh (2020).

## **ABSTRACT**

### **Understanding ASEAN Outlook on Indo-Pacific**

Nearly two years after the Indo-Pacific concept was revived by the U.S. President Donald Trump at the APEC CEO's Summit held in Vietnam in November 2017 and the first U.S-Japan-India-Australia Consultations (Quad) was commenced in the Philippines in the same month, ASEAN member states (AMS) officially announced their Outlook on Indo-Pacific. The outlook aims at coming up with ASEAN's collective leadership in forging and shaping the vision for closer cooperation in the Indo-Pacific, continuing to maintain its central role in the evolving regional architecture in Southeast Asia and its surrounding regions, and continuing being an honest broker within the strategic environment of competing interests. However, each AMS has different interests from the others' in their relations with countries having great stakes in Southeast Asia. For their parts, the latter, including Quad countries must correctly read ASEAN member states' perceptions in order to properly and successfully implement their strategies in the region. By examining the perspective of ASEAN member states on Quad's released-Indo-Pacific concept, and interpreting ASEAN Outlook on Indo-Pacific, this paper will chart out some implications for Australia and India regarding their policies toward ASEAN.

### **Session 2: Marine Litter and Debris in the Bay of Bengal**



#### **Prof Dr. S. Bijoy Nandan**

Dr. S. Bijoy Nandan, is Professor, Dept. of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences, Cochin University of Science & Technology (CUSAT) and Dean, Faculty of Marine Sciences CUSAT. He has been a part of and headed major research and consultancy projects: UN Compensation project in Arabian Gulf coast, Indian Arctic research project and mangrove die

off project in Maldives. Author & co-author to 220 journal articles, books,

proceedings; edited 10 special volumes. Recipient of Jawaharlal Nehru Award in 1993 of Indian Council of Agricultural Research for high quality doctoral (PhD) thesis in India and the UNESCO Fellowship, 2008.



### **Gerry Nagtzaam**

Gerry Nagtzaam is an Associate Professor at the Monash Law School. A renowned researcher both domestically and internationally, his work focuses on the intersections between environmental law, politics, history and economics. He has authored several books on topics including international environmental treaties and their normative treatment, nuclear waste disposal in democratic states, on the phenomenon of ecoterrorism, etc. His forthcoming book is on global plastic pollution regulation.

## **ABSTRACT**

### **Macro and Micro-Plastic Pollution Regulation in the Bay of Bengal and Littoral States**

This paper will firstly outline the issue and scale of macro and micro-plastic pollution in the Bay of Bengal and the adjacent littoral states. It will then critically examine the current international law that relates to plastic pollution in the Bay of Bengal as well as the domestic regulatory approaches to plastic pollution in the littoral states. The paper will then outline some suggestions towards a comprehensive approach to addressing the issue of plastic pollution in the region. Lastly, it will critically examine the current attempts by the global community to create a global plastic treaty and its potential impact on the region's regulatory approach to the issue of macro and micro-plastics.



### **Akansha Tiwari**

Akansha Tiwari is a wildlife filmmaker and conservationist. She has been actively involved in raising awareness about issues concerning marine wildlife and ecosystems. Her recent work is a project called 'Tangled Seas' addressing the problem of discarded fishing gear in the Indian Ocean. Her film, first of its kind, had an impact campaign which ran for three years, included

awareness and outreach programs, activities, state wise petitions that resulted in the creation of an open access 'Indian Ocean Ghost Net Repository'.

## **ABSTRACT**

### **Marine litter and its impact on the ecology of Bay of Bengal**

Marine litter includes plastics, non-biodegradable materials and discarded or lost fishing equipment. Due to the presence of natural phenomena like ocean currents and seasonal strong winds, along with being close to the equator, the eastern part of India's coasts – The Bay of Bengal, receives marine litter that has sources from the coasts to the open ocean. Keeping the magnitude of litter we are witnessing today coupled with the unreliable and tough nature of the sea, it is essential that scientific technology is put to efficient use in order to aid retrieval and clean ups of the said debris. The challenges that one can briefly identify as they deep dive into the hurdles in co-operation between stakeholders are lack of communication and representation between the policy makers and those that are affected by these policies. Mutual understanding between stakeholders, their trust towards each other, efficient data gathering and easy public circulation as well as access can be identified as similar roadblocks.



#### **Dr Salom Gnana Thanga Vincent**

A professor and head, Department of Environmental Sciences, University of Kerala, India, her work focusses on the microbial and macro and meiofaunal diversity in the coastal environment of Kerala and relating the benthic diversity to environmental and anthropogenic impacts. Presently, her research is also focussed on the distribution of microplastics in the coastal environment of South India. Dr.Vincent has been awarded the Association of Commonwealth Universities (ACU) Blue Charter Fellowship for her collaborative research on marine microplastics in the University of Newcastle, Australia during 2019-2020. Dr.Vincent was awarded the DAP grant by Australian Consulate General, Chennai during March 2022 to work on 'Sustainable Management of plastics in the South West Coast of India'. She has published 50 research papers and completed 5 research projects funded by government agencies in India.

## ABSTRACT

### Marine litter and debris in the Bay of Bengal

The plastic garbage in Bay of Bengal (BoB) originates from several countries such as Myanmar, Malaysia, Indonesia, Sri Lanka and India. High coastal populations with poor education and waste management are primarily attributed to the increasing ocean surface litter in the BoB. The impact of changing monsoonal patterns and its effect on transport of marine plastics is a big challenge in the beaching pattern as well as deposition of marine debris of BoB. The occurrence and impact of microplastics on marine biota are also a major concern. Around 1.3 billion microplastics entering the BoB everyday are transported through the Ganges-Brahmaputra-Meghna river basin. The presence of toxic components such as bisphenol A in microplastics, in addition to them acting as carriers of toxic pollutants and pathogenic microbes makes them an “emerging threat” to marine ecosystems. Obviously plastic pollution and unsightly appearance of beaches affects the major components of the blue economy including fish production and marine tourism. The fish production value of 4 billion USD in BoB shows that even a small impact can cause considerable losses to the blue economy, thus affecting the livelihood of the dependent population. Considering the need for achieving sustainable development goal 14.1, within a target period of 2025, the problem of marine plastic has to be addressed at the root level by developing site specific circular economy models. Managing plastic pollution by a “cradle to grave” approach is the need of the hour in addition to reduction in plastic production. Lack of effective policies in the transboundary countries of BoB and the externality nature of plastic pollution needs to be addressed by developing a system to make the consumers/ producers responsible for marine plastic debris and resultant impact on marine life.

### Session 3: Smart Ports and Supply Chains in the Indian Ocean



#### Dr Vijay Sakhuja

Dr Vijay Sakhuja is former Director, National Maritime Foundation, New Delhi. He specialises in issues of national security and public policy, particularly in the context of ocean affairs, geopolitics, Climate Change, Arctic, Blue Economy and 4th Industrial Revolution Technologies. He has

been on the research faculty of institutions like RSIS, ICWA, ORF and IDSA and is currently associated with Cambodia Institute for Cooperation and Peace, The Peninsula Foundation, India Strategic, and Kalinga Foundation.

Dr Vijay Sakhuja is a member of the international editorial board of Journal of Indian Ocean Region (Taylor & Francis) and Journal of Greater Mekong Studies.



### **Capt Martin A Sebastian RMN (R)**

Capt Martin served in the national maritime policy think tank, Maritime Institute of Malaysia (MIMA) from Nov 2011 to June 2020 as Senior Fellow and Centre Head, Centre for Maritime Security and Diplomacy. He served in the Office of Military Affairs (OMA) as Strategic Planning Team Leader for West African missions. He was also nominated as DPKO Focal Point for Maritime and

Riverine Operations. He set up a Maritime Operations Planning Section in OMA. Capt. Martin is currently a Senior Consultant with the United Nations Office of Drugs and Crime, a Consultant with Global Fishing Watch and with the European Union on maritime transport.

## **ABSTRACT**

### **Embracing Industrial Revolution 4.0: Smart Ports, Supply Chain and the Developing Countries**

The advancement of technology has played an important role and has become a key factor in the development of industries. The Industrial Revolution 4.0 is one of the key issues that has gained much attention at conferences and forums on industrial development at the global level. It is expected that the Fourth Industrial Revolution (IR 4.0) will have great impacts on global business and competition. The introduction of new technologies would disrupt existing industry value chains, from agile, innovative competitors who, thanks to access to global digital platforms for research, development, marketing, sales, and distribution, are improving the quality, speed and price at which value is delivered. We are already seeing this in the service and domestic transportation sectors.

While IR 4.0 indicates a clear trend of using more extensive technologies and online platforms to make Smart Ports more efficient by making it safer, more environmentally friendly and more cost efficient, the industry still has far to go in moving forward to achieve the goals of Industrial Revolution 4.0. Hence Smart Ports need to cater for areas such as cargo tracking, maritime supply chain security, environmental protection, navigating safety, planning, operations, administration and monitoring. Smart Ports have raised the level of competitiveness and are highly intense among the industry's players. In relation to this, IR 4.0 demands a crucial reform that would ultimately improve seaport competitiveness and foster the development of the industry.

The need for efficiency and competitiveness has made a significant change at the level of human and machine work division. This requires a clear understanding of workers' roles as a major element and resource of each industry. At the same time, the lack of a workforce with the new required skill set is considered as one of the socio-economic triggers of IR 4.0. This highlights the importance of the training of human elements in the automation and digitisation era. More broadly, training workers with new digital and soft skill sets are considered a fundamental factor for transitioning society into knowledge-based economies. These will be some of the key challenges for developing nations. Some policy introductions and changes to existing policies plus enforcement of these policies will be required.



### **Dr R P Pradhan**

Dr R P Pradhan, PhD, International Relations is an Associate Professor at the Dept of Humanities & Social Sciences, BITS Pilani KK Birla Goa Campus, Goa, India. He also serves as a Distinguished Fellow- Political Economy at the Centre for Public Policy Research, Kerala, (CPPR). Apart from research guidance, Prof. Pradhan has completed three major projects funded by ICSSR,

New Delhi.

Teaching in a science and technology institute, Prof. Pradhan has developed a unique digital data lab that maps all the seaports of the world (over 8000 ports) along with vessel traffic mapping in all these seaports on a daily basis. The lab has been functional since July 2017

with millions of critical data. Prof. Pradhan has jointly edited a book - "Coastal Zone Management in Goa", 1999 and regularly writes in Indian newspapers on several themes of international relations and issues of economic development.

## ABSTRACT

### **Smart Ports and Supply Chains in the Indian Ocean: India's Smart Port Case Analysis**

Prominent seaports like Rotterdam, Hamburg, Singapore or the port of Shanghai are the smart ports of the world today. While all the 76 functional seaports of India cumulatively handle 600-800 vessels a day, Singapore port alone handles around 3000 vessels on a daily basis.

Technologies like AI, IoT, Machine Learning, Big Data, Decision Tree, 5G spectrum, block-chain and virtual realities are now providing tech solutions to integrate seaports' entire supply-chain towards business efficiency and 'Smart Port' models for better port handling and wealth creation.

India's 'Sagarmala Project-2015-35' and Indo-Pacific Oceans Initiative (IPOI) partnership converge well. Indian seaports' existing limitations further contextualise India's 'Smart Port' strategy in the Indian Ocean Region (IOR) towards Indian seaports vessel handling efficiency and supply-chain optimisation.

This paper is based on a three stage analysis. First, in the interest of suitable structural understanding, seaports in the region shall be classified towards a grouping behaviour analysis. Second, using a vessel traffic tracking tool, IOR Seaports actual vessel traffic pattern for a period of four years shall be mapped and quantitatively analysed for supply-chain pattern analysis. Finally, based on seaports classification and their vessel handling behaviour empirical evidence; India's case of 'Smart Ports' and Supply Chains in the Indian Ocean shall be analysed along with policy recommendations.



#### **Dr Andrew D Mitchell**

Andrew Mitchell is Associate Dean (Research) and Professor at the Faculty of Law, Monash University, and a member of the Indicative List of

Panelists to hear WTO disputes. He has previously practised law with Allens Arthur Robinson (now Allens Linklaters) and consults for States, international organisations and the private sector. Andrew has taught law in Australia, Canada, Indonesia, Singapore, and the US. He is the recipient of six major grants from the Australian Research Council (including a Future Fellowship), the Australian National Preventive Health Agency and the National Health and Medical Research Council. Andrew has published over 150 academic books and journal articles, and is an Editor of Edward Elgar's International Economic Law Series, an Editorial Board Member of the Journal of International Economic Law and the Journal of International Dispute Settlement. He has law degrees from Melbourne, Harvard and Cambridge and is a Barrister and Solicitor of the Supreme Court of Victoria.



### **Dr Prashant Bhaskar**

Prashant Bhaskar is an Associate Professor of Maritime and Logistics Management at the Australian Maritime College, an Institute of the University of Tasmania. Prashant has had more than 40 years' association with the maritime industry - as a seafarer, educator, researcher and academic leader. Prashant has broad academic and leadership experience in higher education and vocational education and training sectors, including as former Director of the National Centre for Ports and Shipping. Prashant has contributed extensively to human capability development in the maritime industry through education, training and consultancy in maritime operations and maritime logistics management. Prashant's recent research has focussed on organisational resilience, especially in relation to the management of organisations in the maritime and logistics sectors and supply chains.

## **ABSTRACT**

### **Digital transformation of port-centric supply chains in the Indian ocean: issues and challenges**

First, the paper will examine global developments in the application of industry 4.0 technologies for both modal and nodal infrastructure operations and business processes for freight transport. The paper will

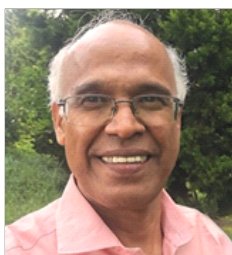
consider specific examples including, but not limited to port and intermodal terminal operations, port community systems, shipment visibility, freight-forwarding and vessel/vehicle automation to identify key issues for stakeholders. Second, the paper will explore challenges and possible solutions for optimisation, logistics integration and digitalisation in the context of port-centric supply chains in the Indian ocean region.

## Session 4: **Plenary Session**



### **Dr T V Paul**

Dr T V Paul is James McGill Professor of International Relations in the Department of Political Science at McGill University, Montreal, and a Fellow of the Royal Society of Canada. Paul specialises in International Relations, especially international security, regional security and South Asia. He is an erudite distinguished fellow of CPR.



### **Dr Joshua Thomas**

Dr. Joshua Thomas is the former Deputy Director of the ICSSR North Eastern Regional Centre, Shillong & was also Coordinator, ASEAN Studies Centre, Ministry of External Affairs, Government of India, Shillong. He is known for his pioneering research in diverse fields of social sciences in North-East India. His areas of interest include issues related to ethnicity, insurgency, peace process, border trade, displacement and India's relations with neighbouring countries particularly with Bangladesh, China and Myanmar.



### **Ambassador Venu Rajamony**

Officer on Special Duty (in the rank of Chief Secretary), External Cooperation at Government of Kerala, Professor of Diplomatic Practice, O.P Jindal Global University, Former Ambassador of India to the Netherlands. He was also the Permanent Representative of India to the Organisation for Prohibition of Chemical Weapons

(OPCW) and responsible for India's relations with the International Court of Justice, the Permanent Court of Arbitration and other legal institutions in The Hague.



### **Dr Sinderpal Singh**

Sinderpal Singh is Senior Fellow and Assistant Director, Institute of Defence and Strategic Studies, and Coordinator, South Asia Programme, IDSS, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore.

## **IPOI SCHOLARS CONNECT - PARTICIPANTS**



### **Alif Hidayat**

Alif Hidayat is a Maritime Security and Diplomacy Researcher at the Maritime Institute of Malaysia (MIMA), Malaysia.



### **Amruta Karambelkar**

Amruta Karambelkar is Research Associate at Vivekananda International Foundation, India. Her research focus is the Indo-Pacific with specific reference to the QUAD and the Indian Ocean.



### **Dr Eric Frécon**

Eric Frécon is an adjunct fellow at IRASEC (Research Institute on Contemporary Southeast Asia) Bangkok, Thailand.



### **Lucio Blanco Pitlo III**

Lucio Blanco Pitlo III is a Research Fellow at the Asia-Pacific Pathways to Progress Foundation, Philippines. He is also a member of the Board of Directors of the Philippine Association for Chinese Studies.



### **Him Raksme**

Him Raksme is a Research Fellow at the Cambodian Institute for Cooperation and Peace, Cambodia, since 2018. He is also a Lecturer at the Department of International Studies, Institute of Foreign Languages, Royal University of Phnom Penh.



### **Dr Harisankar K Sathyapalan**

Dr Harisankar is currently Assistant Professor at the School of Legal Studies, Cochin University of Science and Technology (CUSAT), India and a Research Fellow at CPR.



### **Prof. (Dr) Kittir Prasirtsuk**

Dr. Kittir is Professor of Political Science at Thammasat University in Thailand. He is currently on the advisory committee for the International Studies Center at the Thai Ministry of Foreign Affairs.

**Dr Narvenkar Mukund Vishwanath**

Dr Mukund is an Assistant Professor at the School of International Studies, Goa University, Goa, India.

**Siswanto Rusdi**

Siswanto Rusdi is Founder And Director Of The National Maritime Institute (Namarin), an independent Maritime Think Tank in Jakarta, Indonesia.

**Dr Vu Hai Dang**

Dr Vu Hai Dang is a Senior Research Fellow at Ocean Law and Policy, Centre for International Law, National University of Singapore, Singapore.

