



## Meeting of States Parties

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### Thirty-second Meeting

New York, 13–17 June 2022

Item 13 of the provisional agenda\*

## Statements of qualifications of candidates nominated by States parties for election to the Commission on the Limits of the Continental Shelf

### Note by the Secretary-General

1. The Secretary-General has the honour to submit the statements of qualifications of the candidates nominated by States Parties for the election of 21 members of the Commission on the Limits of the Continental Shelf for a five-year term beginning on 16 June 2023 (see annex). The names, accompanied by information concerning their country of nationality and nominating State, are as follows:

Al Azri, Adnan Rashid (Oman; nominated by Oman)  
Apaalse, Lawrence Asangongo (Ghana; nominated by Ghana)  
Brekke, Harald (Norway; nominated by Norway)  
Carandang, Efren Perez (Philippines; nominated by the Philippines)  
Damrat, Mateusz (Poland; nominated by Poland)  
dos Santos de Campos, Aldino Manuel (Portugal; nominated by Portugal)  
Garcez Faria, Antonio Fernando (Brazil; nominated by Brazil)  
Giao, Pham Huy (Viet Nam; nominated by Viet Nam)  
Glumov, Ivan F. (Russian Federation; nominated by the Russian Federation)  
Han, Hyun-Chul (Republic of Korea; nominated by the Republic of Korea)  
Inniss, Helena (Trinidad and Tobago; nominated by Trinidad and Tobago)  
Khalid, Muhammad (Pakistan; nominated by Pakistan)  
Loukili, Miloud (Morocco; nominated by Morocco)  
Madon, Mazlan bin (Malaysia; nominated by Malaysia)  
Mahanjane, Estevão Stefane (Mozambique; nominated by Mozambique)  
Moreira, Domingos de Carvalho Viana (Angola; nominated by Angola)  
Mosher, David Cole (Canada; nominated by Australia, Canada and New Zealand)  
Njuguna, Simon (Kenya; nominated by Kenya)  
Randriamiantsoa, Tolojanahary (Madagascar; nominated by Madagascar)  
Roest, Walter R. (Netherlands; nominated by France)  
Sivaramakrishnan, Rajan (India; nominated by India)  
Taïar, Azzedine (Algeria; nominated by Algeria)  
Tang, Yong (China; nominated by China)  
Troisi, Ariel Hernán (Argentina; nominated by Argentina)  
Yamazaki, Toshitsugu (Japan; nominated by Japan)  
Yáñez Carrizo, Gonzalo Alejandro (Chile; nominated by Chile)

2. Information concerning the procedure for the election is contained in document [SPLOS/32/8](#).

\* [SPLOS/32/L.1](#).



## Annex

### Statements of qualifications of candidates\*

#### Al Azri, Adnan Rashid (Oman; nominated by Oman)

Dr Al Azri is an Oceanographer with 29 years of working experience nationally and internationally in academic and research. He has over 25 years of academic experience, taught various subjects including biogeochemical/ecological processes to climate change, and supervised postgraduate students at Sultan Qaboos University and international universities. His research focuses on marine oceanography, coastal surveys, marine environmental aspects, environmental impact assessment, marine geology and climate change. He was in charge of the oceanography group at the national level and was significantly involved in research exchange programs with international universities, institutes and research centers. He participated in various international conferences and authored many scientific papers in peer review journals and book chapters. Since 2008, he was seconded and later moved to the Ministry of Foreign Affairs to take charge of the Omani continental shelf extension project. He was in charge of the geological/geophysical survey and follow up on the multi-disciplinary tasks required for the project such as but not limited to: contracting consultant on the project, developing desktop study, developing training program and strategic plan (2019–2030) for Omani candidates, participating in international conferences on implementation of Article 76 of UNCLOS. In 2017, he was elected as a member of the Commission on the Limits of the Continental Shelf (CLCS) for 5 years and serving in four subcommissions (he is vice-chair in two of them). In 2019, he was elected as Chair of the CLCS.

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\* Statements of qualification are issued without formal editing.

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## **Lawrence Asangongo Apaalse (Ghana; nominated by Ghana)**

Mr. Lawrence Asangongo Apaalse holds Masters Degrees in Petroleum Geology and Micropaleontology from the Russian State University of Oil and Gas, Moscow, and University College London, respectively as well as Diploma (Rhodes Ocean Scholar) from Rhodes Academy of Oceans Law and Policy, Greece.

Mr. Apaalse is currently the Chief Director of the Ministry of Energy, responsible for initiating energy policy formulation, monitoring and evaluation as well as supervising and coordinating their implementation in all sixteen (16) Agencies under the Ministry.

Mr. Apaalse has over twenty-two (22) years working experience in the area of exploration geology with the Ghana National Petroleum Corporation (GNPC).

While working at GNPC, he served in the National Continental Shelf Advisory Committee that drafted a Justification Report and a Cabinet Memo for the establishment of the Ghana National Continental Shelf Delineation Project in August 2006. Subsequently became the National Coordinator of the Project and Head of the Technical Core Group which prepared Ghana's submission to the Commission on the Limits of the Continental Shelf (CLCS) for the establishment of the Outer Limits of the Continental Shelf beyond 200 nautical miles in accordance with Article 76 of the United Nations Convention on the Law of the Sea.

From 2010 to 2014, he successfully led Ghana's delegation to series of meetings in New York with the subcommittee established to examine Ghana's submission. He made the final presentation to the CLCS on August 26, 2009, during the 24th Session, culminating in favourable Recommendations adopted by the Commission on 5 September 2014.

He is the architect behind the unanimous adoption of the "no objection note" by ECOWAS member States of Togo, Benin, Nigeria, Cote d'Ivoire and Ghana to the consideration of their submissions in line with the Rules of Procedure of the Commission.

He is currently the Technical Advisor to the Ghana Boundary Commission, overseeing the delimitation of Ghana's maritime boundaries. He led the Technical Team of Ghana in providing inputs for the maritime boundary dispute arbitration between Ghana and Cote d'Ivoire at the International Tribunal for the Law of the Sea.

He is a member of the Ghana Institution of Geoscientists and Ghana Boundary Commission.

He has published variously, including "Ghana's Extended Continental Shelf Submission to the CLCS under Art 76 of UNCLOS" in the Sri Lanka Journal of International Law, Vol. 22(1).

**Harald Brekke (Norway; nominated by Norway)**

Mr Harald Brekke holds a Cand. real degree (Masters/Ph.D. equivalent) in hard rock geology from the University of Bergen (1978–1983) and has additional exams in mathematics, statistics and computer programming and in philosophy and physics, as well as a degree in analytical chemistry.

Since 1984, Mr Brekke has been a Senior Geologist and Project Coordinator in the Norwegian Petroleum Directorate (NPD). His tasks and responsibilities have included geological/geophysical mapping of the geology and petroleum resources of the Norwegian continental shelf.

Additionally, Mr Brekke has since 1996 been a technical advisor to the Norwegian Government on the delineation of the Norwegian continental shelf and since 2000 a member of the national committee on the delineation of the continental shelf of Norway.

Mr. Harald Brekke has held the following international positions:

- Member of the Commission on the Limits of the Continental Shelf from 1997 to 2012, including as Vice-Chairman from 2007.
- Member of the Legal and Technical Commission of the International Seabed Authority from 2012 to 2022, including as Chair from 2021.

As a member of the CLCS, Mr Harald Brekke, inter alia, filled the following positions:

- Chairman of one of the six working groups set up to formulate the scientific and technical guidelines, the Editorial Committee and the Training Committee.
- Chairman of the Sub-commissions for the submissions made by Australia, New Zealand, Japan and France with regard to French Guiana and New Caledonia.
- Vice-Chairman of the Sub-commissions for the submissions made by The United Kingdom of Great Britain and Northern Ireland with regard to the Ascension Island.
- Member of the Sub-commissions for the submissions made by France with regard to the French Antilles and the Kerguelen Islands and by Philippines with regard to the Benham Rise region.

Mr Brekke has also participated in the preparation of the submissions made by Bahamas, Iceland, Madagascar, Mauritius, Nigeria, Seychelles and Sri Lanka, given review of the submissions made by Bangladesh, Canada, Denmark, Iceland, Kenya, Mozambique, Russia, South Africa and been co-ordinator and advisor to the joint project that prepared the submissions made by Mauretania, Senegal, Cape Verde, Gambia, Guinea, Guinea Bissau and Sierra Leone.

## **Efren Perez Carandang (Philippines; nominated by the Philippines)**

### **Personal Information**

Year of Birth: 1961

Place of Birth: Calamba City, Philippines

Languages: Filipino and English

### **Core Competencies**

Hydrography, Extended Continental Shelf Studies, Technical Aspects of the Law of the Sea, Maritime Zones and Boundary Delimitation, Maritime Policy, Geospatial Information Management, Physical Oceanography, Surveying and Mapping, Strategic Planning, Quality Management Systems, Human Resource and Organizational Development

### **Employment Record**

Deputy Administrator, 2010–Present

National Mapping and Resource Information Authority (NAMRIA)

Director, Engineering Services Department, NAMRIA, 2000–2010

Chief, Oceanography Division, NAMRIA, 1993–1999

Hydrographic, Geodetic and Oceanographic Surveyor, NAMRIA, 1984–1993

### **Professional Experience**

Supervising Deputy Administrator for the Hydrography Branch, and Mapping and Geodesy Branch of NAMRIA.

Project Manager of the Philippine Extended Continental Shelf Project which prepared the Philippine submission in the Benham Rise (now Philippine Rise) Region.

Member of Philippine Maritime Boundary Delimitation (MBD) Panel; Chairperson of the Philippine MBD Technical Team.

Chairperson of the Inter-Agency Technical Working Groups on Geographical Names and Undersea Feature Names.

Member of Philippine Delegation to the ASEAN-China Joint Working Group on the Implementation of the Declaration on the Conduct of Parties in the South China Sea, and Joint Permanent Working Groups on Maritime and Ocean Concerns.

Philippine Alternate Chairperson of UN Global Geospatial Information Management (GGIM) Working Group on Disasters (2015–2018) which formulated and conducted global consultations for the GGIM Strategic Framework on Geospatial Information and Services for Disasters – adopted by the UN Economic and Social Council in July 2018.

Resource person providing technical support to national maritime policy initiatives including congressional deliberations on proposed maritime legislations.

Member of Philippine delegation to the UN-GGIM (2011–2018), International Seabed Authority (2013–2015), International Hydrographic Organization (1997 and 2009), and UN Group of Experts on Geographical Names.

Lecturer on the technical aspects of the law of the sea, maritime zones and boundaries, national territory and the South China Sea arbitration.

Member of Editorial Board for the International Bathymetric Charts of the Western Pacific and South China Sea Group of Experts on Hydrographic Data and Information Exchange.

**Education and Training**

Master of Business Administration, De La Salle University (2006)

Bachelor of Science in Civil Engineering, Adamson University (1983)

Group Training Course in Hydrographic Surveying, Japan (1990)

Regional Ocean Dynamics – Collaborative Research and Data Evaluation, Australia (1995)

Oceanographic Research Cruise in the Western Pacific Ocean (1988)

Over 30 short courses on hydrography, oceanography, geodesy, cartography, mapping and related fields

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**Mateusz Damrat (Poland; nominated by Poland)**

Dr. Mateusz Damrat is an expert in the field of marine geology.

Mr. Mateusz Damrat holds a Ph.D. in Marine Geology from Institute of Geological Sciences, at Jagiellonian University, Cracow (2016) as well as M.Sc. (2009) and Engineer's degree of AGH University of Science and Technology, Cracow (2011).

He is currently, a Director (General) of the Polish Geological Institute – National Research Institute, in which he has been employed since 2014 as a Director of the Polish Geological Institute – NRI, he also leads the Polish Geological Survey.

Professional experience of Dr. Mateusz Damrat complements his activities as a co-author of the Technical Report on the interocean metal Joint Organization (IOM) Polymetallic nodules project in the Pacific Ocean Clarion-Clipperton Fracture Zone, Project Contractor from the Polish side in the European Marine Sediments on the Marine Ecosystem (WGEXT) of International Council for the Exploration of the Sea (ICES). During the 26th session of the International Seabed Authority (ISA) he was Vice-President of the Assembly.

The Government of the Republic of Poland is convinced that, if elected, Dr. Mateusz, with his experience and qualifications in geology and management, will contribute to the commission.

The Government of the Republic of Poland, therefore, has the honor to kindly request that the State Parties to UNCLOS lend their valuable support to Dr. Mateusz Damrat in the election for CLCS membership during 32nd Meeting of State Parties to the Convention in June 2022.

## **Aldino Manuel dos Santos de Campos (Portugal; nominated by Portugal)**

### **Personal information**

Date of birth: 10 December 1967

Languages: Portuguese (native speaker)  
English (fluent, spoken and written)  
French: (independent user)  
Spanish: (basic user)

### **Academic qualifications**

Bachelor in Naval Socio-Military Sciences, 1992, Escola Naval.

Specialization in Hydrography (FIG/IHO category A), 1996, Instituto Hidrográfico.

Master of Engineering in Geodesy and Geomatics Engineering, 2001, University of New Brunswick.

Hydrographic Engineer, 2002, Instituto Hidrográfico.

PhD in Territory Engineering (Extension of the Continental Shelf), 2009, Instituto Superior Técnico.

PhD in International Relations (Ocean's Governance), 2021, Faculty of Social Sciences – Universidade Nova University de Lisboa.

### **Professional experience**

2017–	Member of the Commission on the Limits of the Continental Shelf (2017-2022)
	Member of the Committee of Confidentiality (Vice Chair 2017–20; Chair 2020–22);
	Member of the Subcommission of India.
	Member of the Subcommission of the Kingdom of Tonga (Chair);
	Member of the Subcommission of the Russia with respect to the Artic Ocean;
	Member of the Subcommission of the joint submission of France and South Africa with respect to Crozet Archipelago and Prince Edward Island (vice-chair);
	Member of the Subcommission of the submission of Sri Lanka (vice-chair).
2017–	Research Fellow at the Portuguese Institute of International Relations (IPRI)
2016–	Researcher at the Naval Investigation Centre (CINAV – Escola Naval)
2012–2016	Head of the Portuguese Task Group for the Extension of the Continental Shelf.



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2009–2021	Lecturer of Geographic Information Systems, Portuguese Naval Academy, Lisbon, Portugal; Lecturer of Geo-Spatial Information Management, Portuguese Naval Academy, Lisbon, Portugal.
2007–2009	Adviser of the Division of Hydrography for Spatial Data Management; Development and maintenance of the Hydrographic Data Warehouse, Portuguese Hydrographic Office.
2004–2007	Deputy-head of the Division of hydrography: Permanent consultant of the Portuguese Hydrographic Institute at the Task Group for the Extension of the Continental Shelf; Management of the bathymetric information system; Lecturer at the School of Hydrography and Oceanography of the Portuguese Hydrographic Office (GIS, Spatial Data Bases, Hydrographic, Nautical charting and Computer Sciences); Lecturer of the Hydrography course at the Portuguese Naval Academy (Hydrographic Surveying).
2003–2004	Lecturer of Hydrography at Faculty of Sciences of the University of Lisbon, Portugal.
2001–2004	Deputy-head of the Technical and scientific Data Centre: Member of the Working Group for the Desktop Study for the Extension of the Portuguese Continental Shelf.
1996–1999	Deputy-head of the Hydrographic Brigade: Participation in several hydrographic surveys (harbour, coastal and oceanic) in Continental Portugal, the Azores, and Madeira Archipelagos.
1991–1995	Served in the Portuguese Navy surface fleet.

**Antonio Fernando Garcez Faria (Brazil; nominated by Brazil)**

Vice Admiral Antonio Garcez has over 35 years of national and international experience in marine geological, geophysical, oceanographic and hydrographic research. Most of his career has been committed to the Brazilian Hydrographic Service (Directorate of Hydrography and Navigation - DHN), in which he held many significant positions such as the Director of Hydrography and Navigation (2018–2019), the Director of the Brazilian Hydrographic Center (2007–2010) and the Commanding Officer of R/V Antares (2004–2006).

Vice Admiral Garcez has accumulated over 30 months of seagoing experience on geophysical, oceanographic and hydrographic cruises. He has been the Chief Scientist of 12 cruises, including a research of the Brazilian Amazon Deep Sea Fan.

He also participated in several activities related to UNCLOS, such as coordinating the Operational Group for the delimitation of the outer limits of the Brazilian Continental Shelf (2018–2019) and heading the Brazilian delegation throughout the 48th, 49th and 50th Sessions of the CLCS. During these sessions, he made several presentations to the Commission regarding the Brazilian Equatorial Margin and Southern Region Partial Revised Submissions. In 2021, he became the Law of the Sea Senior Technical Advisor of Brazilian Directorate of Hydrography and Navigation. Since December 2021, he has also been a member of the Commission on the Limits of the Continental Shelf.

Additionally, Vice Admiral Garcez has been carrying out significant scientific and technical activities in several marine related sciences, always representing the Brazilian Hydrographic Service and the Brazilian Navy within commissions, committees, working groups, conferences, workshops and meetings. He headed Brazilian delegations in many international organizations such as the International Hydrographic Organization (IHO) and the Intergovernmental Oceanographic Commission (IOC).

Vice Admiral Garcez has solid academic qualifications, having participated in various conferences and authored many articles and technical papers. He has also contributed as a reviewer to national and international scientific journals. Moreover, he was a member of PhD and MSc examining boards at several renowned Brazilian universities, in which he has held lectures. He has also taught at Brazilian Navy academic institutions. As an Admiral, he was appointed to the direction of two of the most prestigious academic institutions of the Brazilian Navy, the Naval War College (2014–2016) and the Directorate of Education (2016–2018).

Vice Admiral Garcez demonstrates technical and academic qualifications for the position of member of the Commission on the Limits of the Continental Shelf.

## **Pham Huy Giao (Viet Nam; nominated by Viet Nam)**

Major: Geological-Geophysical and Geotechnical Engineering

Year and place of birth: 1958, Ha Noi, Viet Nam

Language: Vietnamese, English, Romanian; Russian (reading), Thai (speaking)

### **Education**

Dipl. Ing. (MSc) in Geophysics, Bucharest University, Romania

MEng (& DEng in Geotechnical Engineering, Asian Institute of Technology, Thailand

### **Current Position**

Associate Professor in Earth Science of PetroVietnam University (PVU)

Vice-director of the Water Resources and Environment Institute, Vietnam Association of Hydrogeologists (VAH)

Senior Specialist, Vietnam Petroleum Institute (VPI), Viet Nam

Adjunct Faculty in Geotechnical and Earth Resources Engineering of AIT, Thailand

### **Employment Record**

Asian Institute of Technology, Thailand (1992–2019)

Dong-A University, Korea (1999–2001)

Vietnam Department of Mineral Resources and Geology (1982–1990)

### **Special Honors and Awards**

The Tan Swan Beng Award of the SE Asian Geotechnical Society, 2005

The Brain Korea 21 Grant by the South Korean Government (1999–2001)

Distinguished Teacher Award by the Asian Institute of Technology (2016)

Award on Outstanding Contribution in Reviewing by Engineering Geology Journal, Elsevier, 2017

The Trusted Reviewer Certificate awarded by Institute of Physics (IOP), 2020, for exceptionally high-quality review work

### **Professional Membership**

Life Member: International Assoc. for Mathematical Geosciences (IAMG), and I.A. of Low Land Technology (IALT);

Member: European Association of Geoscientists and Engineers (EAGE); Society of Exploration Geophysics (SEG), USA; Society of Petro-physicist & Well Log Analysts (SPWLA), USA

Vice-president, Vietnam Association of Engineering Geology and Environment (VAEGE)

### **Editorial Board Member**

Petroleum and Petrochemical Engineering Journal, MedWin Publishers, USA

Transport and Communications Science Journal (TCSJ), Viet Nam

**Publications**

Giao has more than 150 publications in international journals and conference. He also edited and co-edited a few books as follows:

Giao P. H. (2005), Integrated Geoengineering for a Sustainable Infrastructure Development, Proc. of the Intl' Symp. Hanoi Geoengineering 2007, 22–23 November 2007 Hanoi, Viet Nam, VNU Publishing House.

Giao P. H. (2007), New Challenges in Geosystem Engineering and Exploration, Proc. of the Intl' Symp. Hanoi Geoengineering 2007, 22–23 November 2007 Hanoi, Viet Nam, VNU Publishing House.

Giao P. H., M. T. Nhuan and N. H. Minh (2010), Urban Geoengineering, Earth Resources and Sustainability in the Context of Climate Change, Proc. of the Intl' Symp. Hanoi Geoengineering 2007, 22–23 November 2010 Hanoi, Viet Nam, VNU Publishing House.

Giao P. H., M. T. Nhuan and D. V. Luyen (2013), “Natural Resources Engineering & Disaster Mitigation for Infrastructure Development, Proc. of the Intl' Symp. Hanoi Geoengineering 2013, 17–19 October, 2013, Viet Nam, VNU Publishing House.

Hien D. H. and Giao P. H. (2010), A Geotechnical-Geophysical Study of the Red River Delta Clay, Lambert Academic Publishing GmbH & Co., Germany, 153 p.

## **Ivan F. Glumov (Russian Federation; nominated by the Russian Federation)**

### **Personal information**

Date and place of birth: 11 September 1936, Kaluga, Russia (USSR)

Languages: Russian: native, English: fluent

Mr. Ivan Glumov is a scientist in marine geophysics and oceanology, Doctor of Technical Sciences, Professor of Moscow State University. Since 2012 has served in the Commission on the Limits of the Continental Shelf (CLCS) including as its Vice-Chair and is a world - known specialist in international law, the United Nations Convention on the Law of the Sea of 1982 (UNCLOS).

Author of more than 125 scientific publications, including five monographs. Honoured Geologist and Scientist of the Russian Federation, Laureate of the USSR State Prize and Prizes of the Government of the USSR and the Russian Federation.

### **Academic Qualification**

1972	PhD in Maritime Geodesy and Hydrography, Moscow State University of Geodesy and Cartography
1988	Doctor of Technical Science (geophysics), Lomonosov Moscow State University

### **Professional Experience**

2012–present	Vice-Chairman, Member of the CLCS
2009–present	Scientific consultant of the Russian Federation Project on the Limits of the Continental Shelf with respect to the Arctic Ocean
2002–2004	Deputy Minister of Natural Resources and Environment of the Russian Federation
1999–2001	State-Secretary/Deputy Minister of Natural Resources of the Russian Federation
1992–1999	Head of Department for Scientific and Maritime issues, Ministry of Natural Resources of the Russian Federation
1988–1991	Head of the Maritime Geological Service, Ministry of Geology of the USSR
1982–1988	Director-General of the Yuzhmorgeologiya, Director of Research in Maritime Geophysics Institute, Ministry of Geology of the USSR
1959–1970	Senior hydrographer, chief geophysist, Chief of Cruise on maritime expeditions of the Ministry of Geology of the USSR

### **Main Professional Activities Related to the UNCLOS**

2012–present	Vice-Chairman, Member of the CLCS
2001–2003	Head of the Russian delegation to the CLCS

1996–2006	Member of the Legal and Technical Commission of the International Seabed Authority (ISA)
1995–2004	Member, Deputy Head, Head of the Russian delegations to sessions of the ISA
1984–1995	Member of the Soviet and Russian delegations to sessions of the Preparatory Commission for the United Nations ISA
1980–1984	Member of the Soviet delegation in negotiations with France, Japan and the USA on the resolution of Seabed Area disputes in Pacific Ocean

## Hyun-Chul Han (Republic of Korea; nominated by the Republic of Korea)

Year of Birth: 1956

Place of Birth: Seoul, Korea

Languages: Korean, English

### Academic Qualifications

1993 Ph.D., Geophysics Department, Texas A&M University, College Station, USA  
(Geophysical constraints on the origin of the Shatsky Plateau)

1983 M.Sc., Department of Geology, Yonsei University, Korea  
(Tectonics of the eastern part of the Jeju Island)

1980 B.Sc. Geology, Yonsei University, Korea

### Research Interests and Experience in International Organizations

Dr. Han's research interests are focused on (a) tectonic problems through data modeling, (b) basin analysis using deep seismic reflection data, and (c) geo-hazard factors using shallow seismic reflection data. He has abundant experience in seagoing research projects and participated as a chief scientist in many research expeditions, including 25 surveys.

In 2006, Dr. Han was appointed as a member of the Sub-Committee on the Undersea Feature Names (SCUFN) under the IHO-IOC. While serving as a member, he proposed a GIS-based system for reviewing naming proposals. He has served as the chair of the SCUFN since 2018. As the chair, he proposed drawing up guidelines for a consistent decision-making process.

### Career Summary

#### Research Scientist

2016.09–Present	Distinguished Research Scientist, Korea Institute of Geosciences and Mineral Resources (KIGAM), Korea
2011.10–2013.10	Executive Director, Petroleum and Marine Research Division, KIGAM
2009.08–Present	Tenured Research Scientist, KIGAM
2002.01–2009.08	Principal Research Scientist, KIGAM
2000.03–2004.02	Adjunct Professor, Department of Geology, Chungnam University, Korea
1993.10–2001.12	Senior Research Scientist, Petroleum and Marine Research Division, KIGAM
1989.08–1993.04	Research Associate, Ocean Drilling Program, College Station, Texas, USA
1980.11–1985.08	Research Scientist, Marine Geophysical Exploration Department, KIGAM

**International Organization Activities**

2019.01–Present	Chairman, SCUFN, IHO-IOC
2006.06–2018.12	Member, SCUFN, IHO-IOC

**Awards**

Bronze Medal for the contribution to Korean Ocean Science, Korean government, 2008

Prime Minister Award in recognition of marine geophysics research of Korea, Korean government, 2001

Minister of Science and Technology Award for excellent research, Korean government, 1997

**Principal Activities Relevant to Continental Shelf Delineation**

2006–2012: Principal research scientist with the Korea Institute of Geoscience and Mineral Resources, responsible for conducting extended continental shelf mapping and contributing to the Korea Extended Continental Shelf task force

2000–2006: Project manager overseeing the scientific planning, data collection, and analysis of Korea's extended continental shelf submissions

**Publications – SCI(E)**

Among others:

“Geophysical characteristics of the Hupijiao Rise,” *Nature* (2015)

“Rapid formation of the Shatsky Rise oceanic plateau,” *Marine Geology* (1993)



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**Helena Inniss (Trinidad and Tobago; nominated by Trinidad and Tobago)**

Helena Inniss, Geologist, Upstream Energy Expert derives her expertise from a combination of training and experience. She has worked in the Energy Industry in Trinidad and Tobago for over three decades where she gained comprehensive knowledge of global tectonics, more specifically the regional tectonics of the Atlantic margin. This experience was gained in the petroleum industry, however, the application of the knowledge of regional tectonics is not limited solely to that industry.

Ms. Inniss is currently a consultant, but she spent most of her working life in the Ministry of Energy and Energy Industries, Trinidad and Tobago where she started work as a Geologist overseeing the operations of petroleum companies in Trinidad and Tobago. In the last fifteen years of her career at the Ministry she was responsible for the administration of the upstream sector of the petroleum industry, the last six years as Director of Resource Management, a de facto role which she undertook for sixteen years. This involved initiating geological studies, some regional in nature to inform the evolution of the local geology. Planning competitive bid rounds from 1995 to 2011 from the policy, technical and legal standpoints and the operationalising of the Production Sharing Agreement. She has provided upstream consulting services for Grenada and the Commonwealth Secretariat providing a framework for the petroleum industry from commencement to final abandonment.

Ms. Inniss attended training in Argentina organised by the Division for Ocean Affairs and the Law of the Sea (DOALOS) in preparation for the work to be undertaken on Trinidad and Tobago's submission in 2008 and was the Director of the division in the Ministry which prepared the technical aspects of the 2009 submission. She is currently consulting with the Ministry of Energy Trinidad and Tobago coordinating the preparation of the amendment of the Trinidad and Tobago's extended continental shelf project as per Article 76 of the United Nations Convention on the Law of the Sea (UNCLOS).

She is a graduate of University of the West Indies Mona, Jamaica in Geology and Geography and the recipient of an MSc in Energy Studies (Distinction) from the University of Dundee, CEPLMP.

## **Muhammad Khalid (Pakistan; nominated by Pakistan)**

Commodore Muhammad Khalid SI (M) is an experienced Hydrographer, with more than 25 years of field, staff and command expertise linked with various avenues of hydrography and ocean research. Born on 06 March 1974, he joined Pakistan Navy in September 1990 and was commissioned in Operations Branch in January 1995. He holds two masters degrees: Field of Physical Oceanography from Naval Postgraduate School (NPS), Monterey, CA, USA and War Studies (Maritime). He has done courses in CAT (A) Hydrography from the UK and CAT (B) Hydrography from International Maritime Academy, Trieste, Italy. He has also undergone the Exclusive Economic Zone Management Course from the UK.

Having served as Hydrographer Pakistan Navy and as National Hydrographer & Coordinator NAVAREA IX from 2018–2021, he remained member of various national/ International bodies/ committees and contributed at these platforms. He remained member of Board of Governors of National Institute of Oceanography (NIO), Committee on National Earth Observations Programme, SUPARCO and Technical Member on UNCLOS-82 to the Ministry of Defence. He represented Pakistan on various international forums including International Hydrographic Organization (IHO), North Indian Ocean Hydrographic Commission (NIOHC) and ROPME Sea Area Hydrographic Commission (RSAHC).

He has commanded two ships from 2014–2017. His prominent appointments include Staff Officer Hydrography at Naval Headquarters (Islamabad) and at Pakistan Navy Hydrographic Department (Karachi), Senior Surveying Officer onboard Survey Vessel (2010) and Executive Officer onboard Survey Vessel (2013–2014).

Commodore Khalid is a charge surveyor. During his service in hydrography, he remained involved with numerous hydrographic and physical oceanographic surveys of deep offshore waters, coastal waters, internal waters and Creeks of Pakistan. He has substantial experience in planning/ undertaking/ managing hydrographic surveys and remained actively involved in the policy making aspects of hydrographic service in Pakistan in his capacity as Chief Hydrographer.

Commodore Khalid remained a member of Technical Committee for Pakistan Extension of Continental Shelf Project and remained engaged in advising the Government on matters related to Pakistan's Continental Shelf. He headed Pakistan's delegation as Member of Intergovernmental Oceanographic Commission's (IOC) Executive Council at UNESCO HQs, Paris, France in 2015–2016 and 2019–2021 and IHO Council Meeting in London, UK in 2018. In 2019, he represented Pakistan at North Indian Ocean Hydrographic Commission (NIOHC) meeting in Muscat, Oman and in 2019, chaired the ROPME Sea Area Hydrographic Commission (RSAHC) meeting held in Islamabad, Pakistan.

In recognition of his meritorious services, Commodore Khalid has been awarded high level Military medal in 2021.

**Miloud Loukili (Morocco; nominated by Morocco)**

The Kingdom of Morocco has nominated Professor Miloud Loukili to serve on the Commission on the Limits of the Continental Shelf for the 2023–2028 term.

Professor Loukili has more than 40 years of national and international experience in maritime studies and international law research, with a special focus on issues related to maritime delimitation.

Currently a research professor at the Mohammed V University in Rabat, a position he has held since 1975, Professor Loukili has served in several executive positions, including as Director of the Higher Institute of Maritime Studies (1990–2002) and as Director of Merchant Navy within the Ministry of Equipment and Transports (2002–2003). He also served in the Office of the Minister of Agriculture and Maritime Fisheries (2010–2015).

Professor Loukili has been closely involved in the multilateral process related to the elaboration of UNCLOS. He was thus part of the Moroccan Delegation to the Third UN Conference on the Law of the Sea and to the Preparatory Commission on the International Seabed Authority and the International Tribunal on the Law of the Sea (New York and Geneva, 1976–1990).

At the international level, Professor Loukili has served as a member of the UNESCO Expert Group on High Sea Fishing (New York, 1991), as a member of the Group of Legal Experts on the Legal Regime of the High Seas of the International Union for the Conservation of Nature (2009), as well as a member of the Board of the World Maritime University in Malmo (1999–2001). Furthermore, he served as a member of the Drafting Committee of Regional Convention on Telluric Pollution in the Mediterranean (Geneva, 1980).

He was also part of the Moroccan Delegation to the Joint Morocco-Egypt Maritime Commission and to the Joint Morocco-Tunisia Maritime Commission. In the same vein, Professor Loukili has served on the Moroccan Delegation to the Working Group on Maritime Delimitation between Morocco and Spain in the Atlantic Ocean.

Professor Loukili's research focus is currently on the issues related to maritime delimitation.

Professor Loukili, whose long experience combines legal expertise with in-depth knowledge of the scientific and technical aspects involved in the delimitation of the outer limits of the continental shelf, is committed to contribute to the implementation of the mandate of the Commission on the Limits of the Continental Shelf with the highest levels of professionalism and dedication, as per Article 76 of UNCLOS.

**Mazlan bin Madon (Malaysia; nominated by Malaysia)****Current Position**

Advisor, Malaysian Continental Shelf Project, National Security Council, Malaysia

Member, Commission on the Limits of the Continental Shelf (2012–2017 and 2017–2022)

**Personal Data**

Year of Birth: 1961

Place of Birth: Johor, Malaysia

**Education**

1996 – PhD: Earth Sciences, Oxford, UK

1992 – MSc: Geology, Universiti Malaya, Malaysia

1984 – BSc (Hons.): Geology, Southampton, UK

**Professional Profile**

Dr Madon is a geologist with 33 years of experience in the petroleum industry, specializing in regional studies, basin analysis, sedimentology, and tectonics. From 2007 to 2017, he was the “Custodian” or Chief Geoscientist in PETRONAS. He authored technical papers on geology, sedimentology, and petroleum geology, and is the main author in 1999 PETRONAS publication, “Petroleum Geology and Resources of Malaysia”.

In 2008–2009, he assisted the Malaysian Continental Shelf Project (MCSP) in the drafting of the Malaysia-Vietnam joint submission of 2009. Since 2017 he serves as Advisor to MCSP.

Dr Madon served as a CLCS member (2012–2017, 2017–2022) and the subcommission member for:

- Cook Islands
- Argentina
- Mauritius (as Chair)
- Russian Federation (as Chair)
- Kenya
- Portugal

**Geological Society of Malaysia (GSM)**

President (2013–17)

Vice-President (2010–13)

**Awards**

2013 – Fellow, Academy of Sciences Malaysia

2017 – Honorary DSc, Universiti Malaysia Terengganu

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**Publications**

Madon, M., Watts, A.B., 1998. Gravity anomalies, subsidence history, and the tectonic evolution of the Malay and Penyu Basins. *Basin Research*, 10, 375–392.

Madon, M. et al., 2006. Petroleum systems of the Northern Malay Basin. *Geol. Soc. Malaysia Bull.*, 49, 125–134.

Madon, M., 2007. Overpressure development in rift basins: an example from the Malay Basin, offshore Peninsular Malaysia. *Petroleum Geoscience*, vol. 13, pp. 169–180.

Madon, M., 2010. Submarine mass-transport deposits in the Semantan Formation (Middle-Upper Triassic), central Peninsular Malaysia. *Geol. Soc. Malaysia Bull.* 56, 15–26.

Madon, M. et al., 2013. The structure and stratigraphy of deepwater Sarawak, Malaysia: implications for tectonic evolution. *Jour. of Asian Earth Sci.*, 76, 312–333.

Madon, M., 2017. The continental shelf – five decades of progress (1966–2016). *Geol. Soc. Malaysia Bull.*, 63, 145–156.

Madon, M., 2020. Exploration and exploitation of non-living natural resources on the continental shelf beyond 200 nautical miles: a status review. *Geol. Soc. Malaysia Bull.*, 70, 17–28.

Madon, M., Jong, J., 2021. Geothermal gradient and heat flow maps of offshore Malaysia: some updates and observations. *Geol. Soc. Malaysia Bull.*, 71, 159–183.

Madon, M., 2021. Five decades of petroleum exploration and discovery in the Malay Basin (1968–2018) and remaining potential. *Geol. Soc. Malaysia Bull.*, 72, 63–88.

**Estevão Stefane Mahanjane (Mozambique; nominated by Mozambique)**

Dr. Mahanjane is an internationally qualified and renowned geoscientist with exceptional knowledge in the field of marine geosciences; and the delimitation of the continental shelf. He received a PhD in applied geosciences in 2014 from Gottfried Wilhelm Leibniz Universität Hannover, Germany.

Dr. Mahanjane has published extensively on subjects in the geosciences, academic journals and peer-reviewed books including Marine & Petroleum Geology; Marine geophysical research; Earth Science; Gondwana; and Marine Geology.

At the national level (Nationally), Dr. Mahanjane is a great asset to Mozambique as he has a great knowledge of the acquisition, processing and interpretation of geological, geophysical and bathymetric data, essential for the application of Article 76. He has experience in marine surveys, organizing several scientific works on cruises together with international institutions as co-chief scientist on board, i.e., the German Bundesanstalt für Geowissenschaften und Rohstoffe (BGR) and the Alfred Wagner Institute (AWI), the Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER), and the Second Oceanographic Institute of China (SIO), aimed at collecting bathymetric, geological and geophysical data.

Equally important, he has been heavily involved in oil exploration along Mozambique's continental shelf. He has actively participated in-house integrated studies to optimize hydrocarbon potential and build a data package for the most successful international bidding rounds, including mentoring young scientists and participating in internship programs with concessionaires.

Prior to joining CLCS in 2012, Dr. Mahanjane was directly in charge of preparing the technical-scientific information in support of Mozambique's submission submitted to the UN CLCS in 2010. He designed and planned data acquisition in 2007 to support the successful submission.

Dr. Mahanjane also contributes significantly to education, professor at several national universities in geosciences for undergraduate and Master's degree programs in Petroleum Engineering, Oil and Gas Management. Internationally, he contributes to the training programs on the scientific aspect of the continental shelf under the Convention, organized by the University of the Faroe Islands in collaboration with the Tanzania African Institute of International Law. Additional contributions on the same subject were made at Jindal University of India and at three Chinese universities, namely Xiamen, Wuhan and Tsinghua.

As a member of CLCS since 2012, he has made a remarkable contribution to the Commission's work in the interest of the international community. He serves as a member of various sub commissions and chairman of the subcommissions for Nigeria, India, Cote d'Ivoire, Iceland, as well as chairman of the Confidentiality Committee.

## **Domingos de Carvalho Viana Moreira (Angola; nominated by Angola)**

Age: 57 years old

Place of Birth: Luanda – Republic of Angola

### **Educational Qualification**

Basic education in Luanda.

Bachelor of Geological Engineering: Academy of Mines Berg-Akademie Freiberg-Federal Republic of Germany.

Degree in Geophysics – Agostinho Neto University (UAN) Luanda/Angola;

Masters (MSc), Geosciences in Natural Resources and Environment. Area of Concentration: (Oil and Gas)–UAN;

Advanced Studies, Physical Oceanography at the Institute of Sea Studies – Admiral Paulo Moreira (IEMAPM) in Cabo Frio-Brazil.

Advanced Studies, Underwater Mountains and Hotspots by UFF-Brasil.

Advanced Studies, Sedimentary Basins and Sedimentary Processes by the State University of Rio de Janeiro (UERJ)  
Department of Oceanography.

Doctor (PhD), in Marine Geology and Geophysics: Ocean and Earth Dynamics Program at the Fluminense Federal University (UFF) Rio de Janeiro/Brazil. Area of Concentration: Geology, Geophysics and Oceanography.

### **Professional Experience**

- Technical Coordinator of the National Underground Water Company - Hidrominas (Ministry of Geology and Mines) and of the UNICEF Project - Geological and Geophysical Studies for the Supply of Underground Water to the semiarid areas of southern Angola (Namibe, Huila and Cunene).
- Technician at the National Institute of Geology/Ministry of Geology and Mines.
- Coordinator of the Geosciences area of the Interministerial Commission for the Delimitation and Demarcation of Maritime Spaces in Angola (CIDDEMA).
- Course on Delimitation and Litigation, Demarcation and Maintenance of Borders held by the University of Duhram - England, 2012.
- Member of the technical team that prepared the Survey for Geophysical and Geological Surveys for the Angola Continental Shelf Extension Project (PEPCA).
- Member of the technical team on Geodesy works in the parameters of Transformation of Datum CAMACUPA to WGS84 throughout Angola, 2014.
- Technical Coordinator of the Interministerial Commission for the Delimitation and Demarcation of Maritime Spaces in Angola (CIDDEMA).
- Member of the United Nations Commission on the Limits of the Continental Shelf (CLCS) since 2017 (Experience in evaluating submissions from Brazil - South Margin, France - S. Paul and Amsterdam, Kenya, Spain - Galicia, Brazil Equatorial Margin).

**Languages**

Portuguese (Official Language)

German (spoken and written)

English (written and spoken in adaptation)

French (understands)

Spanish (understands)



**David Cole Mosher (Canada; nominated by Australia, Canada and New Zealand)**

Dr. David Mosher has been a Commissioner on the Commission on the Limits of the Continental Shelf (CLCS) since 2017. In this role, he has served on seven subcommissions, of which two were as Chair and one as Vice-Chair. In addition, on four of these subcommissions, the CLCS has already passed full sets of recommendations. Dr. Mosher is also a member of the Scientific and Technical Advice Committee, which assisted DOALOS in redrafting and providing a short course on Article 76.

Dr. Mosher is a marine geoscientist with 40 years of international research experience in collecting, analyzing, and interpreting marine geoscientific data on continental margins around the world. He has carried out 50 seagoing expeditions, 28 of these as Chief Scientist, including one as Chief Scientist on the International Ocean Drilling Program. He is the author of 120 refereed publications and the editor of four books. His research spans the Equatorial to North Pacific Ocean, and from the Atlantic and Indian Oceans to the North Pole, and includes disciplines as diverse as paleoceanography, sedimentology, stratigraphy, structural geology, and engineering geology along passive, active, and transform margins.

Dr. Mosher enjoyed a 32-year career with the Geological Survey of Canada (GSC) during which he spent 8 years on Canada's Pacific coast and 26 years on Canada's Atlantic coast; the last 14 of those on Canada's extended continental shelf program. He co-authored Canada's partial submission on the outer limits of the continental shelf in the Atlantic Ocean and was principal author on Canada's partial submission in the Arctic. Dr. Mosher took a leave of absence from the GSC between 2015 and 2017 to take a position as full professor at the Center for Coastal and Ocean Mapping at the University of New Hampshire. In this role, he contributed to the extended continental shelf program of the U.S. and taught geological oceanography and ocean mapping to graduate and undergraduate students.

Graduating with a PhD in marine geophysics from Dalhousie University in 1993, Dr. Mosher also received an M.Sc. in Earth Sciences from Memorial University and a B.Sc. in Geology from Acadia University. He has held adjunct professor positions at the University of Victoria and Dalhousie University, graduating 11 MSc, three PhD, and seven BSc students. He is an associate editor for the Journal of Marine Geology and is a regular reviewer and guest editor for numerous other scientific journals.

## **Simon Njuguna (Kenya; nominated by Kenya)**

### **Personal Data**

Name: Simon Njuguna  
 Year of Birth: 1970  
 Place of Birth: Nairobi, Kenya  
 Profession: Geologist, Environmental scientist and Urban and Regional Planner  
 Languages: English, Swahili

### **Educational background**

2000–2001 Master Degree in Geological Resources and Environmental Geoscience, International Institute of Earth Observations, Netherlands  
 1996–1999 Master of Arts Degree in Planning, University of Nairobi, Kenya  
 1990–1995 Bachelor of Science Degree in Geology (First Class), University of Nairobi, Kenya

### **Professional and Employment record**

Geoscientist for over 25 years with vast theoretical and practical experience in the field of geological sciences in both national and international capacities, and as a GIS specialist.

### **Positions held in chronological order**

2013 to date Scientist, and Deputy-Director, Maritime Division, Kenya International Boundaries Office (KIBO)  
 2006–2015 Researcher, Directorate of Research & Development, KIBO  
 2001–2002 Part time Lecturer, Department of Environment Planning & Management, Kenyatta University  
 1997–2006 Geologist, Mines & Geological Department, Ministry of Environment & Natural Resources  
 1995–1996 Geologist, Groundwater Surveys Kenya Limited

### **Membership in professional societies**

Member, Geological Society of Kenya  
 Member, Geologists Board of Kenya

### **Commission on the Limits of the Continental Shelf (CLCS)**

2012 to date Member of the Commission on the Limits of the Continental Shelf

Served in leadership positions -- as Chair to one of the Commission's Sub-commissions; as Vice-Chair to another; and as member in seven Sub-commissions.

**Awards and honours accorded**

Accorded the national honour of The Order of Grand Warrior of Kenya by the Head of State for devotion to duty and commitment to the service of his nation.

**Miscellaneous Assignments and extraneous contribution**

He is an accomplished trainer on the subject of delineation and has been invited to deliver lectures by various universities -- including Wuhan and Xiamen Universities for their 2021 programmes. He has also conducted in-person lectures-- for the summer programmes on the Continental Shelf, jointly-organized by the University of Faroe Islands and the African Institute of International Law (Tanzania) in 2018 and 2019.

He was a technical advisor and lead scientist in the Task Force established to advise the process leading to the delineation of Kenya's continental shelf.

He participated in major conferences, including as advisor in the Kenyan delegations to the 18th, 19th and 20th meetings of States Parties to the United Nations Convention of the law of the Sea (UNCLOS).

He continues to share his experience and contribution to the wider international community through participation in UNCLOS implementation-related seminars, conferences and symposia.

**Tolojanahary Randriamiarantsoa (Madagascar; nominated by Madagascar)****Member of the technical core group for the Delimitation of the Continental Shelf of Madagascar since 2007**

Rich experiences on the knowledge of the technical aspect of Article 76 of the Law of the Sea, acquired through the different trainings and workshops given by Norwegian organizations in 2007, namely: Grid Arendal, Petrad and Norwegian Petroleum Directorate (NPD), involvement on the application of this knowledge on the case of the continental shelf in the South of Madagascar.

Excellent on use of the GEOCAP software and its modules in order of delineation of the outer limit of the continental shelf.

Active implication on the different phases of the process of the Madagascar submission extended continental shelf project, from the desktop study to the presentation in front of the Commission on the limit of Continental Shelf in 2011. Also, very integrated on the future works of finalizations of the partial submission to complete the request from Madagascar extended plateau, namely the preparation of the seismic plan for the preparation of the data complement to the Madagascar submission, and geological and geophysical research on the southern continental shelf of Madagascar and in the south East Indian Ocean.

**Geophysicist at the “Office des Mines National et des Industries Stratégiques” (OMNIS) since 2006, then Head of Department Data Bank Management, from 2013 until now**

Petroleum Exploration Data Manager since 2006, Designer and implementation of the database management system for petroleum upstream data of OMNIS. The experience acquired through the development of this database has allowed a good adaptation with the tools and database modules especially the Arc-Gis software.

The sixteen years of work experience in the field of upstream petroleum activity have enabled the acquisition of various applied knowledge in Geoscience, such as gravimetric and magnetic geophysical methods. Among this knowledge, the skill on the seismic method is the most outstanding through the various studies of the Malagasy sedimentary basin, from the acquisition up to the data processing and especially on the geological modeling by seismic interpretations using the working software Kingdom SMT and Petrel.

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**Walter R. Roest (Netherlands; nominated by France)**

Dr Roest holds a Bachelor's degree in Physics from the University of Utrecht in the Netherlands. He continued his education with a M.Sc. in Experimental Physics, obtained in 1982 from the same University. Particularly interested in Marine Geosciences, he obtained a second M.Sc. degree in Geophysics followed by a Ph.D. in Marine Geophysics, obtained in 1987 at the University of Utrecht. He is fluent in Dutch, English and French.

Dr Roest has over 30 years of experience as a research scientist in the field of Geophysics, both on land and in the marine environment. From 1990 to 2002, he worked at the Geological Survey of Canada, in Ottawa, as a research scientist. During that period, he was also director of the Crustal Geophysics Subdivision from 1997 to 1999 and interim director of the Continental Geosciences Division in 2001. In 2003, he moved to France where he became the director of the Marine Geosciences Department of Ifremer, the French public institute for marine research. From 2003 to 2012, he was the scientific and technical head of the French UNCLOS continental shelf program, EXTRAPLAC. In that capacity, he led all scientific and technical activities, from data acquisition at sea, data processing and interpretation, to the construction of a total of eight partial submissions, including three joint submissions, as well as interactions with the Commission on the Limits of the Continental Shelf (CLCS) and its sub-commissions.

Walter Roest was a member of the CLCS between 2012 and 2017 and was elected Vice Chair for the group of Western Europe and others (WEOG). He chaired four sub-commissions (Ghana, Ontong-Java, Seychelles and Côte d'Ivoire), and was vice chair on others. In 2018, he created a consultancy agency, assisting coastal states in matters related to their continental shelves while pursuing his career as a senior research scientist at Ifremer.

Dr Roest has published or co-published over 80 peer-reviewed articles, 100 reports and over 240 abstracts in national and international journals and other publications. He also wrote, and / or participated in the development of a large number of assessments and established many maps, open-file reports and papers on various issues relating to continental margins and their potential resources, notably as the scientific and technical manager of EXTRAPLAC. He has participated in more than 100 conferences and seminars, nationally and internationally.

**Rajan Sivaramakrishnan (India; nominated by India)****Personal information**

Year of Birth: 1955

Place of birth: Trivandrum, India

**Academic Qualifications**

1995      Ph.D. Geology & Geophysics (University of Hawaii)

1977      M. Sc. Geology (University of Kerala, India)

1975      B. Sc. Geology (University of Kerala)

**Professional Positions held**

2016–18 Consultant and Coordinator  
International Indian Ocean Expedition-2, INCOIS, Hyderabad

2012–15 Director, National Centre for Polar and Ocean Research (NCPOR, formerly  
NCAOR), Goa

2007–12 Member, Commission on the Limits of the Continental Shelf. Re-elected for  
another 2012–14 five-year term 2012–17, but resigned in Feb 2014 pursuant to  
becoming Director at NCAOR, Goa

1998–12 Scientist and Project Director (Indian Continental Shelf Project), NCAOR

1979–97 Geologist, Geological Survey of India

**Professional Experience**

Commission on the Limits of the Continental Shelf:

- Chairman of the Sub-commissions to consider the continental shelf submissions made by Barbados, Suriname and Denmark (area north of Faroe Islands, 2012–13)
- Vice-Chairman of the Sub-commission to consider the submission made by Uruguay
- Member of the Sub-Commissions to consider the submissions made by New Zealand, Australia and Mexico (partial submission)
- Vice-Chairman of the Standing Committee on provision of Scientific and Technical Advice to Coastal States and the Editorial Committee to consider the amendments to the Rules of procedure (2007–12)

**Activities relevant to continental shelf studies:**

- Indian Continental Shelf project: A lead role in gathering, analyzing and documenting all scientific and technical data for making India's submission to the CLCS for an extended Continental Shelf.
- Myanmar continental shelf programme (2008): Provided guidance to Myanmar scientists in the preparation of the country's submission for an extended shelf.
- Organised two five-day training workshops on "Delineation of the outer limits of the continental shelf" for scientists/officials from Sri Lanka and the Union of Myanmar during April and October 2005 respectively.

- 2015–present: Continued involvement in the continental shelf studies by providing advice to the Indian Continental Shelf Project in matters related to maritime zonation, article 76 and India's submission to the CLCS for an extended shelf.

**Other professional accomplishments:**

- Chief Scientist/ participant scientist in several marine geological/ geophysical/ geotechnical ocean/coastal surveys and studies; Nodal officer for India's scientific endeavours in the Arctic (2007–12); Member, Indian Scientific Expedition to Antarctica (2003–2004); Associate Editor, Journal of Geological Society of India (from 2018); Principal author/co-author of over 90 publications in journals, books, scholarly presentations made in conferences, seminars and invited lectures.

**Azzedine Taiar (Algeria; nominated by Algeria)**

Date and place of birth: 25/07/1963; Koléa, Tipaza, Algeria

Holder of an engineering degree in geodesy from the National School of Geodetic Sciences and Space Technology (ENSGTS) and an MBA from Robert Gordon University (RGU), with a 34 years' experience in the field of data management and processing.

Rich experience with many skills relating to the tools of digital production data and information management with spatial reference acquired through a seven years' experience the National Institute of Cartography and Remote Sensing (INCT).

Thorough knowledge of data management and processing field and the computerized solutions of management of E&P data acquired through a ten years' experience within SONATRACH where I was in charge of the modernization of the cartography activity, by the introduction of GIS and Geomatic technologies in the cartographic production process as well as the management of E&P data and in parallel my participation in the implementation of the exploration data bank.

Perfect autonomy in the management of complex projects and capacity to manage the missions of assistance to prime contracting and project management acquired through the position of Director of the National Data Bank (NDB) division within the National Agency for the Valorization of Hydrocarbon Resources (ALNAFT) where my participation as a project manager, in the creation and implementation of the National Data Bank (NDB) solution, has allowed me to understand the functional and technical requirements necessary for the creation and implementation of data management solutions in general and exploration data and production of hydrocarbons in particular.

Participation in in the group in charge of the delimitation of Algerian maritime boundaries as a representative of the hydrocarbon sector, member of the committee for the delimitation of maritime boundaries in the western Mediterranean Sea off the Algerian coast and a member of the joint Algerian-Italian negotiating committee where I have actively engaged in the efforts of the commission in order to contribute to enable it to fulfill its mission as an expert body of scientists at the service of the Algerian state.

Strong sense of communication, unwavering open-mindedness and natural curiosity.



## **Yong Tang (China; nominated by China)**

Dr. TANG Yong is an outstanding marine geophysicist and now serves as the Director of the Research Center of Exclusive Economic Zone and Continental Shelf, the Second Institute of Oceanography, Ministry of Natural Resources of China. He is also a Professor and Doctoral Supervisor at Shanghai Jiao Tong University and Zhejiang University respectively.

Having been engaged in the research on the delineation of the outer limits of the continental shelf beyond 200 nautical miles for nearly 20 years, Dr. TANG has accumulated extensive experience in this field and is proficient in continental shelf delineation and GIS software, including GeoCap, CarisLots and ArcGis. As the Chief Scientist and Project Leader in joint cruises and research projects held by China and some African States, he made valuable contributions to the international cooperation on marine geophysics and delineation of continental shelf. Dr. TANG is also the Project Leader in various projects under the National Key R&D Program, the National Natural Science Foundation. In addition, Dr. TANG presided over a number of projects and sub-projects under Delineation of Continental Shelf Program, Global Change and Air-Sea Interaction Project, China Ocean Research and International Cooperation Program. He also participated in more than 10 expeditions including those under China Ocean Research Project.

Up to now, Dr. TANG has published more than 40 papers and 7 monographs on continental margin and the outer continental shelf. He is also the owner of 7 patents and software copyrights related to the delineation of the outer continental shelf. Dr. TANG has been selected into the High-level Leading Talents in Scientific & Technological Innovation of Ministry of Natural Resources, China.

Since elected as a member of the Commission on the Limits of the Continental Shelf (CLCS) in 2019, Dr. TANG has been participating, as the Vice Chair of the Sub-Commission, in the consideration of the Submissions made by Palau and India respectively. He is also a member of the Sub-Commissions for consideration of a Submission made by Nigeria and a Joint Submission made by France and South Africa. He has outstanding professional ability and works with diligence and responsibility, and makes positive contributions to the work of the CLCS.

Dr. TANG's qualifications fully meet the requirements as contained in article 2, paragraph 1, of Annex II to the United Nations Convention on the Law of the Sea.

## **Ariel Hernán Troisi (Argentina; nominated by Argentina)**

The background of Captain Ariel Hernán Troisi demonstrates that he fully complies with the criterion established in article 2 of the above-mentioned annex to the Convention.

Navy Captain Ariel Troisi holds a degree in Oceanography from the Buenos Aires Institute of Technology and a master's degree in Science and Technology Policy and Management from the University of Buenos Aires. He joined the Argentine Navy in 1988 and currently serves as Technical Secretary for the Naval Hydrographic Service, coordinating oceanographic, hydrographic and cartographic activities.

His international experience includes various roles related to the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization. Indeed, he has chaired multiple programmes and activities, such as the International South Atlantic Buoy Programme, the International Oceanographic Data and Information Exchange Programme and the IOC Group of Experts on Capacity Development.

He served as IOC Vice-Chair for Latin America and the Caribbean between 2015 and 2019, in charge of planning and strategy. He currently serves as IOC Chair (2019-2023). In this capacity, he actively participates in the design, preparation and implementation of the International Decade of Ocean Science for Sustainable Development 2021–2030, as well as in other United Nations processes on behalf of IOC, including the second to fourth sessions of the preparatory committee and the first to third sessions of the intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, the 2015 United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development and the twenty-fifth and twenty-sixth sessions of the United Nations Framework Convention on Climate Change.

His extensive professional experience in implementing and managing scientific and technical activities in various areas of marine science, as well as in coordinating and leading multidisciplinary teams, is a valuable asset. His technical knowledge and background, as well as his analytical and management skills, enable him to address and resolve complex issues, generating coherent and logical structures.

With regard to the Commission on the Limits of the Continental Shelf, Captain Troisi was closely involved in the preparation of the Argentine submission on the outer limit of the continental shelf and actively participated in the Commission's consideration of the submission (2012–2017).

Given his extensive scientific and technical background and professionalism within the United Nations and specifically within the Commission on the Limits of the Continental Shelf, Captain Troisi is an excellent candidate to serve in a productive, solid and efficient manner as a member of the Commission.

## **Toshitsugu Yamazaki (Japan; nominated by Japan)**

Member of the Commission on the Limits of the Continental Shelf

Professor, Atmosphere and Ocean Research Institute, the University of Tokyo

Date of Birth: 20 March 1959

Place of Birth: Aichi, Japan

### **Education**

Ph.D., Kyoto University, 1990 (Geology)

B.S., Kyoto University, 1981 (Geology)

### **Current Positions**

2017–present	Member, Commission on the Limits of the Continental Shelf
2012–present	Visiting Researcher, National Institute of Advanced Industrial Science and Technology
2012–present	Professor, Atmosphere and Ocean Research Institute, the University of Tokyo

### **Professional Experience**

2015–2019	Visiting Senior Scientist, Japan Agency for Marine-Earth Science and Technology
2006–2012	Guest Professor, University of Tsukuba
2002–2012	Group Leader, Institute of Geology and Geoinformation, National Institute of Advanced Industrial Science and Technology
2000–2001	Deputy Director, Research Planning Office, Geological Survey of Japan
1994–1995	Visiting Associate, California Institute of Technology
1992–1993	Senior Staff, Science and Technology Agency, Japan
1990–2000	Senior Researcher, Geological Survey of Japan
1981–1990	Researcher, Geological Survey of Japan

### **Research Activities**

My current research interests are mainly focused on: (1) reconstruction of the past geomagnetic field using marine sediments, (2) application of rock magnetism to marine geology and paleoceanography, (3) hotspot motion and mantle dynamics, and (4) origin and development of the Philippine Sea Plate. I have rich experience in seagoing research projects and have participated in 57 research cruises, including 10 led by me as Principal or Co-Principal Investigator. I have been involved in the promotion of the Integrated Ocean Drilling Program (IODP) as a co-chief scientist and member of various committees.

### **Major Research Cruise Experience**

May 2019, Philippine Sea by R/V Shinsei-maru (KS-19-8 cruise) (Chief Scientist)

Aug. 2014, Japan Sea by R/V Shinsei-maru (KS-14-13 cruise) (Chief Scientist)

Dec. 2010 to Feb. 2011, IODP Expedition 330: Louisville Seamount Trail by D/V JOIDES Resolution (Co-chief Scientist)

May to June 2008, IODP Expedition 321: Pacific Equatorial Age Transect by D/V JOIDES Resolution

Nov. to Dec. 2007, Central North Pacific by /V Yokosuka (YK07-16 cruise) (Chief Scientist)

Oct. 2005, Offshore of New Guinea by R/V Kairei (Japan-Indonesia) (Chief Scientist)

Aug. to Sep. 2004, Southeast Pacific by R/V Yokosuka(YK04-08 cruise) (Chief Scientist)

Nov. to Dec. 2003, Mariana Trough by R/V Kairei (KR03-13 cruise) (Chief Scientist)

Jan. 2000, South and Central Pacific by R/V Kairei (KR99-12 cruise) (Chief Scientist)

### **Professional Associations**

The Society of Geomagnetism and Earth, Planetary and Space Sciences

American Geophysical Union

Paleosciences Society

Geological Society of Japan

Japan Society for Marine Surveys and Technology

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**Gonzalo Alejandro Yáñez Carrizo (Chile; nominated by Chile)**

Professor Yáñez has a Ph.D. in Geophysics from Columbia University in the United States, and he is one of the most qualified Chilean scientists in the fields of terrestrial and marine geophysics. He has a vast and renowned academic and scientific career, currently teaching at Universidad de Chile and Pontificia Universidad Católica de Chile. He has extensive experience in cooperation, both at the national and international level, in matters of scientific investigation, having participated in countless and influential research projects that have generated a myriad of publications in the most prestigious scientific journals. Moreover, professor Yáñez has participated in many different conferences, training courses, and national and international symposiums.

In his current position as member of the Commission, professor Yáñez has provided an outstanding service. He has actively participated in the Commission's efforts to fulfil its mission as a body of scientific experts, holding the position of Vice-Chair of the Commission on the Limits of the Continental Shelf. He is also the Chair of the Latin American and Caribbean States Group (GRULAC), the Chair of the subcommission that studies and makes recommendations in the submission by Sri Lanka, Vice-Chair of the subcommission that studies and makes recommendations in the submission by Spain, member of the subcommissions that study and make recommendations in the submissions by Brazil and France (regarding La Réunion Island and the Islands of Saint-Paul and Amsterdam), and member of the Committee on Confidentiality of the Commission on the Limits of the Continental Shelf.

Professor Yáñez has therefore acquired invaluable experience in matters related to the review of submissions to establish the outer limits of the Continental Shelf beyond 200 nautical miles. The State of Chile confirms that professor Yáñez will be fully available for the Commission's work sessions, as has been the case from 2017 to date.

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