

**Economic and Social Council**Distr.: General
21 May 2019

Original: English

Economic Commission for Europe**Committee on Sustainable Energy****Expert Group on Resource Management****Tenth session**

Geneva, 29 April – 3 May 2019

Report of the Expert Group on Resource Management**I. Introduction**

1. The tenth session of the Expert Group on Resource Management was held on 29 April to 3 May 2019.¹
2. This report summarizes the discussions on the work of the Expert Group at its tenth session. All the documents and presentations of the tenth session are available on the United Nations Economic Commission for Europe (ECE) website.

II. Attendance

3. The meeting was attended by experts from the following ECE member countries: Albania, Azerbaijan, Belgium, Bosnia and Herzegovina, Canada, Cyprus, Czech Republic, Denmark, Germany, Georgia, Greece, Hungary, Italy, Kazakhstan, Kyrgyzstan, Netherlands, Norway, Poland, Portugal, Russian Federation, Serbia, Sweden, Switzerland, Tajikistan, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America and Uzbekistan.
4. Experts from Algeria, Angola, Australia, Brazil, Burkina Faso, Cambodia, Cameroon, Central African Republic, Chad, China, Colombia, Democratic Republic of the Congo, India, Indonesia, Japan, Jordan, Kenya, Kuwait, Liberia, Madagascar, Malawi, Mexico, Mongolia, Morocco, Mozambique, Namibia, Niger, Nigeria, the Philippines, Pakistan, Republic of Korea, South Africa, Sudan, Suriname, Thailand, Uganda and United Republic of Tanzania participated under Article 11 of the Commission's Terms of Reference.
5. From the United Nations system and Specialized Agencies, representatives of the United Nations Economic Commission for Africa (ECA), and the International Atomic Energy Agency (IAEA) attended. Representatives from the European Commission (EC), represented by the EC Directorate-General (D.G.) for Internal Market, Industry, Entrepreneurship and SMEs (D.G. GROW), D.G. for Research & Innovation, and the

¹ Official documents of the session are available at <http://documents.un.org/>. Unofficial room documents and presentations delivered at the meeting are available on the ECE website at: <https://www.unece.org/index.php?id=50179>.



European Institute of Innovation and Technology (EIT) RawMaterials participated. Representatives from the African Union Commission (AUC) also participated.

6. The following international organizations were represented: African Development Bank (AfDB), African Minerals and Geosciences Centre (AMGC), Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP), EuroGeoSurveys (EGS), International Finance Corporation – World Bank Group, and Organization of African Geological Surveys (OAGS).

7. Representatives of the following non-governmental organizations participated: Advocates for Human Rights (via webex), Alternative du Developpement Economique et Social, American Institute of Professional Geologists (AIPG), Association de l'Education environnementale pour les futures générations (AEEFG), Association for Development, Advancement and Promotion of Ecological Agriculture, Tourism and Environment Protection, Bureau pour la croissance intégrale et la dignité de l'enfant, Center of Industry Management, Centre for International Sustainable Development Law, Committee for Mineral Reserves International Reporting Standards (CRIRSCO), Confederation of European Waste to Energy Plants (CEWEP), ECODEV-SUD, Entwicklungsfonds Seltene Metalle (ESM) Foundation, European Federation of Geologists (EFG), European Disability Forum, Federation of European Materials Societies (FEMS), Geological Society of Africa (GSAf), Giving Life Nature Volunteers, Institute of Management Accountants (IMA), International Chamber of Commerce (ICC) Environment & Energy Commission, International Financial Reporting Standards (IFRS) Foundation, International Geothermal Association (IGA), International Association of Hydrogeologists (IAH), International Institute for Environment and Development (IIED), International Union of Geological Sciences (IUGS), Jeunes Volontaires au Service du Monde, Millenium Institute, Nature Cares, Nigeria Environmental Society, OASIS Association, Petrad, Regional Centre for International Development Corporation, Rural Community Development Program, SEG Civil Society Support Center, Serbian Geology Association, Society of Petroleum Engineers (SPE), Society of Petroleum Evaluation Engineers (SPEE), The Geneva Consensus Foundation, Union des Amis Socio Culturels d'Action en Développement (UNASCAD), Volta Basin Authority, World Nuclear Association (WNA), and World Resources Forum Association (WRFA).

8. The private sector was represented by experts from over 50 companies. Academia was also represented by experts from more than 20 universities and institutes.

III. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.3/2019/1

9. The provisional agenda as contained in ECE/ENERGY/GE.3/2019/1 was adopted without amendment.

IV. Election of Officers (agenda item 2)

10. The Expert Group elected a Bureau to take over from the end of the ninth session for a term of two years. It was noted that Mr. Rafal Misztal replaced Mr. Hubert Schwarz as the representative from Poland; Mr. Young Joo Lee replaced Mr. Adichat Surinkum as the representative from the Coordinating Committee for Geoscience Programmes in East and South-east Asia (CCOP); and, Mr. Paul Msoma replaced Mr. Frank Mugenyi as the representative of AUC due to reassignment of duties. Mr. Radoslav Vukas stepped down as the representative of Serbia on his retirement and a replacement is awaited. Ms. Adrienne Hanly stepped down as representative of IAEA and a replacement is awaited.

11. The outgoing Bureau members, Mr. Hubert Schwarz, Mr. Radoslav Vukas, Mr. Frank Mugenyi, Mr. Adichat Surinkum and Ms. Adrienne Hanly were thanked for their longstanding commitment and support of the work of the Expert Group.

12. The Bureau now comprises: Mr. David MacDonald (United States of America) as Chair, Mr. Igor Shpurov (Russian Federation) as First Vice Chair, and Ms. Nurangiz

Farajullayeva (Azerbaijan), Mr. Kjell Reidar Knudsen (Norway), Mr. Rafal Misztal (Poland), Ms. Mücella Ersoy (Turkey), Mr. Bradley Van Gosen (United States of America), Mr. Hussein Allaboun (Jordan), Mr. Tunde Arisekola (Nigeria), Mr. Milan Grohol (EC D.G. GROWTH), Mr. Paul Msoma (AUC), Mr. Young Joo Lee (CCOP), Mr. Fatih Birol (IEA), Mr. Roger Dixon (CRIRSCO), Professor Gioia Falcone (IGA), Mr. Bernard Seiller (SPE), Mr. Michael Neumann (EFG), Mr. Zoltán Horváth (EGS), Mr. Roberto Sarudiansky (Latin American Mining Organization (OLAMI)) and Mr. Alistair Jones (Technical Advisory Group of the Expert Group on Resource Management) as Vice-Chairs. It was noted that nominations from Portugal, Serbia, Australia and IAEA are awaited.

V. Opening remarks (agenda item 3)

13. The ECE Executive Secretary welcomed the participants to the meeting and emphasised the need to deliver on the Sustainable Development Goals (SDGs). She noted with satisfaction that the United Nations Framework Classification for Resources (UNFC) and the United Nations Resource Management System (UNRMS) are aimed at this purpose and are being applied in many countries and regions.

14. The Chair also welcomed the participants, noting the increased attendance by governments, international organizations, professional associations, industry, and academia.

15. The Chair noted the sad loss of three members of the Expert Group since the tenth session: Professor El-Hassan Sayouty, Dr Gustav Grob and Mr. Andrej Šubelj. Professor Sayouty tragically died in a plane crash on 10 March 2019 near Addis Ababa, Ethiopia, while en route to participate in a side event on the UNFC-African Mineral and Energy Resources Classification and Management System (UNFC-AMREC) at the fourth session of the UN Environment Assembly (Nairobi, Kenya, 11-15 March). Following memorial speeches, a minute's silence was observed in their memory and their contribution to the work of the Expert Group.

16. The Chair drew attention to the draft set of conclusions and recommendations circulated prior to the meeting, noting that this was the method of working previously adopted by the Expert Group and that it is in line with the Guidelines on Procedures and Practices for ECE Bodies that were adopted by ECE at its sixty-fifth session in April 2013. He emphasized that the draft conclusions and recommendations were not intended in any way to prejudice the discussions but rather to provide a draft text to facilitate discussions. The Expert Group agreed to consider and approve conclusions as the agenda items were discussed rather than considering them en bloc at the end of the meeting.

17. The Chair noted that he and many of the Vice-Chairs, as well as other members of the Expert Group, had delivered presentations at a number of minerals, petroleum and renewable energy-related conferences and workshops around the world and that these all served to promote greater understanding of the application and benefits of UNFC and UNRMS.

18. Since the ninth session, the Bureau has conducted its work through seven audioconferences, one face-to-face meeting and regular e-mail correspondence. The Chair noted that the minutes of Bureau meetings are available on the ECE website.

19. The Chair thanked the Bureau members and their alternates for their work, time and commitment since the ninth session. He also thanked the Chairs and members of all the sub-groups of the Expert Group on Resource Classification: Technical Advisory Group, Minerals Working Group, Petroleum Working Group, Nuclear Fuel Resources Working Group, Injection Projects Working Group, Renewable Energy Working Group, Geothermal Sub-group, Bioenergy Sub-group, Solar Energy Sub-group, Wind Energy Sub-group, Anthropogenic Resources Working Group, Groundwater Working Group, Commercial Working Group, Sustainable Development Goals (SDGs) Delivery Working Group, Resourcing Working Group, Communications Working Group, UNFC Revision Task Force, Environmental and Social Considerations Task Force and the Competent Person Task Force. He noted that the membership of the Bureau and all the sub-groups constitutes a body of over

250 experts who work on the promotion and further development of UNFC on a voluntary basis between and during the annual sessions of the Expert Group.

20. The Chair provided a brief update on the status of the development of UNFC and the areas of progress on the deliverables of the work plan for 2018–2019.

VI. Workshop on the United Nations Framework Classification for Resources and the United Nations Resource Management System (agenda item 4)

21. The Chair provided a summary of the workshop held on 29-30 April 2019 which included a training and presentations on UNFC and UNRMS and efforts to ensure alignment with the 2030 Agenda for Sustainable Development. The event was attended by 150 participants, of which 30 were women. The final programme and presentations delivered at the workshop are available on the ECE website.²

22. Participants requested that the event be repeated as part of the Expert Group's eleventh session. The Expert Group requested the secretariat to organize such additional training events.

VII. Activities and priorities of the Committee on Sustainable Energy and any matters for consideration by the Expert Group on Resource Management (agenda item 5)

23. The Director, ECE Sustainable Energy Division, provided an update on the relevant outcomes of the twenty-seventh session of the Committee on Sustainable Energy, September 2018. The Committee noted with appreciation the progress the Expert Group has made since its twenty-sixth session on delivering on its mandated activities and work plan for 2018-2019, in particular, the significant work that has been undertaken to support the implementation of UNFC in various geographical contexts. The Committee endorsed the change of name of the Expert Group on Resource Classification to the Expert Group on Resource Management and the revised Terms of Reference, which include development of UNRMS as a tool-kit for sustainable management of resources. The Committee also approved the Expert Group's work plan for 2018–2019.

24. The following documents were endorsed by the Committee at its twenty-seventh session:

(a) Bridging Document between the National Standard of the People's Republic of China Classification for Petroleum Resources/Reserves (GB/T 19492-2004);

(b) Bridging Document between the National Standard of the People's Republic of China Classification for Resources/Reserves of Solid Fuels and Mineral Commodities (GB/T 17766-1999)

(c) Specifications for application of UNFC to Anthropogenic Resources.

25. The Director provided a brief overview of the ongoing strategic review of the ECE sustainable energy sub-programme, which is aimed to make the activities more cohesive, with closer cooperation between all groups of experts, to contribute to attainment of the 2030 Agenda for Sustainable Development.

26. The Expert Group noted the ongoing strategic review of the ECE sustainable energy sub-programme and tasked the Bureau to contribute to this process and inform the Expert Group of its outcomes.

² <https://www.unecce.org/index.php?id=50179>.

VIII. Mandate and Terms of Reference of the Expert Group on Resource Management (agenda item 6)

Documentation: ECE/ENERGY/GE.3/2019/3 Mandate and Terms of Reference of the Expert Group on Resource Management

27. The Chair provided a brief overview of the mandate and revised Terms of Reference, following the approval of the name change of the Expert Group. The revised Terms of Reference include development of the United Nations Resource Management System (UNRMS).

28. Recognizing its expanding mandate, the Expert Group noted the urgency to mobilize resources at scale to support both its work and that of the ECE secretariat. The Expert Group requested the Bureau in cooperation with the secretariat to raise extrabudgetary resources as an immediate priority.

29. Noting that its mandate expires in December 2019, the Expert Group recommended that its mandate be renewed for a further five years to 31 December 2024.

30. The Expert Group noted that United Nations Economic and Social Council (ECOSOC) Decision 2004/233 needs updating to reflect the new name for the United Nations Framework Classification for Resources (UNFC) and the broadening of its areas of application. The Expert Group requested the Bureau, in cooperation with the secretariat, to start the process of updating the Decision.

IX. The 2030 Agenda for Sustainable Development and the United Nations Framework Classification for Resources and the United Nations Resources Management System (agenda item 7)

31. Mr. Peter Handley, Head of Unit, Resource Efficiency and Raw Materials, DG GROW, European Commission, provided a keynote presentation on the need for a comprehensive management system for resources in the European Union (EU). He emphasised the raw materials initiative of the EU and the current use of UNFC to assimilate data on critical raw materials required for the European Battery Initiative.

32. Mr. Igor Shpurov, First Vice-Chair, Expert Group on Resource Management and State Committee on Mineral Reserves, Russian Federation, provided a keynote presentation outlining a vision and goals for sustainable development and how UNFC and UNRMS can play a prominent role in the sustainable management of resources.

33. A high-level panel discussed the challenges and opportunities to achieving socially and environmentally sound management of resources, and how to target locally appropriate solutions and mechanisms. The panel was moderated by Mr. Scott Foster, Director, Sustainable Energy Division, ECE. The panellists were Mr. Akbatyr Nadyrbaev, Committee of Geology and Subsoil Use, Kazakhstan; Mr. Sumanta Chaudhuri, Secretary (Coal), Government of India; Mr. Ulises Neri, National Hydrocarbons Commission (CNH) Mexico; Mr. Fhatuwani Ramagwede, GeoScience Council, South Africa; and Ms. Karen Hanghøj, CEO, EIT Raw Materials.

34. The Expert Group requested the Bureau - in cooperation with the Sustainable Development Goals Delivery Group - to further develop and promote the principles, methodologies and case studies for realization of the Sustainable Development Goals that can aid development of UNRMS and submit this documentation to the eleventh session.

X. Pathways to Sustainable Energy (agenda item 8)

35. Professor. Gioia Falcone, Lead of the Geothermal Sub-Group, and the focal point for the Expert Group on the Pathways to Sustainable Energy Project, and Ms. Anastasia Ioannou,

Intern, ECE, provided details of the input provided by members of the Bureau of the Expert Group on the project's results and proposed key messages.

36. The Expert Group recognised that the project "Pathways to Sustainable Energy" represents a unique opportunity for the Expert Group to contribute to a dialogue on a sustainable energy system of the future and the role of resource management therein. The Expert Group determined to provide key insights and messages for the planned policy and technology dialogues with the aim to provide recommendations on the role of sustainable resource management and the importance of accommodating social and environmental considerations, so that they can be presented at the twenty-eighth session of the Committee on Sustainable Energy, 25-27 September 2019. This engagement will involve participation in the open-ended consultation process on policy recommendations organized by the Committee in Geneva, 16 May 2019.

37. With those aims in mind, the Expert Group requested that its Bureau and key experts remain fully engaged in the Pathways to Sustainable Energy project and contribute to it.

XI. Development, maintenance and application of the United Nations Framework Classification for Resources and the United Nations Resource Management System (agenda item 9)

Documentation: EGRM-10/2019/INF.3 – Unofficial Room Document: Technical Advisory Group Annual Report 2018–2019 dated 21 April 2019

38. Mr. Alistair Jones, Chair, Technical Advisory Group, provided an update on the status of and progress made in the development, maintenance and application of UNFC for sustainable management of resources since the ninth session.

39. The members of the Technical Advisory Group are: Mr. Alistair Jones (Chair), Ms. Karin Ask, (Chair, Injection Projects Working Group), Mr. Frank Denelle (Chair, Renewable Energy Working Group), Mr. Julian Hilton (Interim Chair, Nuclear Fuel Resources Working Group), Mr. Sigurd Heiberg (Chair, Commercial Working Group), Mr. Ulrich Kral (Chair, Anthropogenic Resources Working Group), Mr. Michael Neumann (Chair, Minerals Working Group), Mr. Satinder Purewal (Chair, Petroleum Working Group), Professor Marco Petitta (Chair, Groundwater Working Group), Chair of the Expert Group and Secretary of the Expert Group. It was noted that Ms Adrienne Hanly was a member of the Technical Advisory Group until 31 October 2018 in her capacity as Chair of the Nuclear Fuels Working Group. Ms. Hanly was thanked for her contribution to the work of the Group.

40. The Expert Group noted with appreciation the work of the Technical Advisory Group to coordinate the activities of all sectoral Working Groups and recommended that it continue to provide technical support for the integrated development of UNFC and UNRMS principles, specifications, guidelines and case studies for all resources to aid policy formulation, national resource management, company business process innovation and financial reporting.

(a) Revision of the United Nations Framework Classification for Resources

Documentation: EGRM-10/2019/INF.2 – Unofficial Room Document: UNFC updated Version 2019 dated 16 April 2019

41. The Chair of the Expert Group presented the goals for UNFC, notably to (i) provide a useful tool to aid communication and insight into the status of sustainable development of energy, natural and anthropogenic resources; (ii) provide something novel that does not reproduce existing tools; (iii) work with and for all stakeholders, including governments, industry, financial institutions, and society; and (iv) supply tools to meet the SDGs. He then presented a number of proposals regarding the revamp of UNFC which were subsequently discussed and debated by the Expert Group.

42. The Expert Group recommended that the language in UNFC be revisited to be inclusive of the full spectrum of the various commodities and stakeholders of UNFC. The Expert Group further recommended that the revamped and harmonized text of UNFC be prepared in time for submission to the Committee on Sustainable Energy at its twenty-eighth session, 25-27 September 2019. The Expert Group tasked the Bureau, in close cooperation with all the sub-groups of the Expert Group, to undertake this revamping and harmonization of the language in UNFC. The revamped UNFC should be distributed to the Expert Group for information prior to submission to the Committee.

43. The Expert Group also recommended to engage with new stakeholders (statistics users, developing countries, renewable energy sectors, etc.) to clarify specific requirements of a classification system to meet their needs and to build consensus on the value of UNFC. The Expert Group requested the Bureau ensure this engagement and outreach and to do so before end-2019.

44. The Expert Group further recommended to simplify and update the UNFC category and subcategory definitions in order to build a framework that will be of greater value for the United Nations Resource Management System (UNRMS), and to provide efficient, digital tools to aid the understanding and use of UNFC. The Expert Group requested the Bureau, in close cooperation with all the sub-groups of the Expert Group, to prepare a first draft by end-January 2020. The Expert Group noted the need to ensure that any update of the UNFC category and subcategory definitions should be closely aligned and linked to the development of UNRMS.

45. The UNFC Revision Task Force comprises: Mr. David MacDonald (Chair, Expert Group), Chair, Mr. Kjell Reidar Knudsen (Norwegian Petroleum Directorate (NPD)), and the Expert Group Secretary. The Task Force will be expanded to ensure all UNFC stakeholders are represented.

(b) Concept and design of the United Nations Resource Management System

Documentation: ECE/ENERGY/GE.3/2019/10 – United Nations Resource Management System: Concept and design *dated 2 April 2019*

46. The Chair provided an overview of the concept and design of UNRMS emphasizing the need for a systems' view of resource management to meet the needs of sustainable development. Mr. Peder Jensen, International Resources Panel, UN Environment, provided details of the recently published Global Resource Outlook 2019, wherein the importance of a holistic and integrated life-cycle view of resource management has been restated. Mr. Julian Hilton, Chair, SDGs Delivery Working Group, provided further details of the UNRMS concept and its proposed design such that it could satisfy the requirements of the SDGs.

47. The members of the SDGs Delivery Working Group are: Mr. Julian Hilton (Aleff Group and Chair), Mr. Jong Moon "Jay" Choi (Institute of Management Accountants (IMA)), Mr. Vitor Correia (EFG), Ms. Malika Moussaid (Aleff Group), Mr. Manzoor Qadir (United Nations University), Ms. Alessandra Hool (ESM Foundation), Mr. Wang Qingru (China National Oil Corporation (CNOC)) and Mr. Harikrishnan Tulsidas (ECE).

48. Recognizing the key role of sustainable resource management in the realization of the Sustainable Development Goals, the Expert Group recommended the preparation of UNRMS as a tool for an integrated systems approach to the 2030 Agenda for Sustainable Development. The Expert Group requested the Bureau, in close cooperation with the Sustainable Development Goals Delivery Group, to develop the overarching principles of UNRMS and, subsequently, associated system structure including data management and specifications to support sustainable resource management and present the draft documentation to the eleventh session. As a first step, the Expert Group requested the Bureau to prepare a short statement outlining who will use UNRMS, what information users need, and for what purpose UNRMS would be used. This statement should be circulated to the Expert Group by 1 September 2019.

(c) Minerals

49. Mr. Michael Neumann, Chair, Minerals Working Group, provided an overview of the activities of the Working Group. Mr. Johann Gotsis, Managing Director, GlobalRock, member and incoming Chair, Minerals Working Group, provided an update on the status of development of specifications for minerals. The Expert Group thanked Mr. Neumann for his efforts during his time as Chair of the Minerals Working Group.

50. The members of the Minerals Working Group are: Mr. Johann Gotsis (GlobalRock) and Chair, Ms. Anne Allendorf-Schicht (K-UTEC), Ms. Ruth Allington (Pan-European Reserves and Resources Reporting Committee (PERC)), Mr. Arda Arcasoy (Consultant), Ms. Gerlee Bayanjargal (CRIRSCO), Mr. Florian Beier (DMT), Mr. Phil Broadhurst (Consultant), Mr. Konstantin Bushuev (Geosolutions Limited), Mr. Ibrahim Coulibaly (Ministry of Mines, Cote d'Ivoire), Mr. Arif Zardi Dahlius (Indonesian Society of Economic Geologists (MGEI)), Mr. Roger Dixon (CRIRSCO), Ms. Mucella Ersoy (Turkish Coal Enterprises), Mr. Martin Fairclough (IAEA), Mr. Hendrik Falck (Geological Association of Canada), Ms. Karen Hanghoj (EIT RawMaterials), Mr. Michael Haschke (DMT), Mr. Andreas Hucke (DMT), Mr. Markku Iljina (Geoconsulting), Mr. Aaron Johnson (AIPG), Mr. Kaj Lax (Geological Survey of Sweden), Mr. Egor Lebedev (GKZ of the Russian Federation), Ms. Brenda Lothion (Consultant), Mr. Mark Mihalasky (U.S. Geological Survey (USGS)), Mr. Sandor Mulsow (International Seabed Authority (ISA)), Mr. Michael Neumann (EFG), Mr. Yuqing Niu (Beijing Research Institute of Chemical Engineering and Metallurgy (BRICEM)), Mr. Gbenga Okunlola (GSaf), Ms. Anke Penndorf (K-UTEC), Mr. Bob Ring (ANSTO-Minerals), Mr. Bernd Schürmann (Consultant), Mr. Luis Sobral (CETEM Brazil), Mr. Yoseph Swamidharma (Komite Cadangan Mineral Indonesia (KCMII)), Mr. Bernd Schürmann (AMSTRA), Mr. Ernst-Bernhard Teigler (DMT), Mr. Micha Zauner (UIT/General Atomics) and Mr. Harikrishnan Tulsidas (ECE).

51. The Expert Group noted with appreciation the work of the Minerals Working Group and the progress made in the development of a comprehensive minerals management system that includes specifications and guidelines for UNFC and UNRMS. The Expert Group requested that the draft document be presented to the eleventh session.

(d) Petroleum

Documentation: ECE/ENERGY/GE.3/2019/5 – Pilot project for the classification of Mexico's petroleum resources and reserves based on the United Nations Framework Classification for Resources (UNFC) *dated 14 February 2018*

EGRM-10/2019/INF.4 - Global Resource Classification Systems for Oil and Gas: A Review and Comparison using SWOT Analysis *dated 2 April 2019*

52. Mr. Satinder Purewal, Chair, Petroleum Working Group, provided an update on the activities of the Working Group, in particular the work on a comparison study of UNFC and different classification systems for oil and gas (EGRM-10/2019/INF.4). The inputs from this study will be used in the development of the UNFC petroleum specifications, the work on which is progressing.

53. Ms. Alma América Porres Luna, Commissioner, National Hydrocarbons Commission (CNH), Mexico, provided details of the recently concluded pilot for the classification of Mexico's petroleum resources and reserves based on UNFC (ECE/ENERGY/GE.3/2019/5).

54. Mr. Bob Felix Ocitti, Petroleum Authority of Uganda and member, Petroleum Working Group, presented on behalf of Mr. Denis Ariko, Petroleum Authority of Uganda, details of a case study on application of UNFC to selected petroleum projects in the Albertine Graben, Western Uganda.

55. The members of the Petroleum Working Group are: Mr. Satinder Purewal (Polestar Oil&Gas and Imperial College), Chair, Mr. Andrew Barrett (Geoscience Australia), Ms. Vera Bratkova (State Committee on Mineral Reserves (GKZ) of the Russian

Federation), Mr. Jan Bygdevoll (NPD), Mr. Simplicio Caluyong (Philippine National Oil Company Exploration Corporation (PNOC-EC)), Ms. Narmina Garayeva (independent expert), Mr. Olaf Klarner (EFG), Mr. Ulises Neri (CNH Mexico), Mr. Felix Bob Ocitti (Petroleum Authority of Uganda), Mr. Alexander Shpilman (Research Institute, Tyumen), Mr. Narendra K. Verma (Oil and Natural Gas Corporation (ONGC) Videsh) Ms. Barbara Pribyl (Santos), Mr. Claudio Virus (Alberta Energy Regulator), Mr. Fidel Juárez Toquero (CNH Mexico), Mr. Steve Griffiths (ERC Equipoise Ltd (ERCE)), Mr. Jim Jenkins (Alberta Energy Regulator), Mr. Zhenhua Rui (MIT) and Ms. Yang Hua (China National Petroleum Corporation (CNPC)). Mr. Dominique Salacz (Evolution Resources) was a member until February 2019. The Expert Group thanked Mr. Salacz for his contribution to the Petroleum Working Group.

56. The Expert Group noted with appreciation the work of the Petroleum Working Group and the progress made in the development of specifications and guidelines for application of UNFC and UNRMS to petroleum projects and requested that the draft documentation be presented to the eleventh session.

57. The Expert Group noted with appreciation the pilot project for application of UNFC for identifying and classifying social and environmental aspects to petroleum project advancement in Mexico and the case study prepared by the Petroleum Working Group under the leadership of the National Hydrocarbons Commission of Mexico and in collaboration with the Ministry of Energy and the Safety, Energy and Environment Agency (ECEC/ENERGY/GE.3/2019/5). The Expert Group requested that the pilot project and case study be posted to the ECE website.

(e) Renewable energy resources

Documentation: ECE/ENERGY/GE.3/2019/8 – Draft Specifications for the application of the United Nations Framework Classification for Resources to Wind Energy dated 17 April 2019

ECE/ENERGY/GE.3/2019/9 – Draft Specifications for the application of the United Nations Framework Classification for Resources to Solar Energy dated 17 April 2019

58. Mr. Frank Denelle, Chair, Renewable Energy Working Group, provided an update on the activities of the Working Group. This update noted that the work to apply UNFC to marine energy has yet to start. In view of the progress made by the Working Group and the importance of UNFC and UNRMS for uptake of renewable energy, the Expert Group requested strengthened communication and cooperation between the Working Group and the ECE Group of Experts on Renewable Energy.

59. The members of the Renewable Energy Working Group are: Mr. Frank Denelle (Chair, independent expert), Ms. Leïla Ajjabou (INFACT Project), Ms. Raffaella Cristianetti (DuPont), Professor Gioia Falcone (University of Glasgow and IGA), Mr. Markus Klingbeil (Shell), Mr. Mike McCurdy (ICF), Mr. James Primrose (BP Alternative Energy), Mr. Bernard Seiller (Total), Mr. Jeremy Webb (Challenge Institute) and Secretary of the Expert Group.

60. Professor Gioia Falcone, University of Glasgow, IGA, and Chair, Geothermal Sub-group, presented an update on the application of UNFC to geothermal energy resources. Dr. Marit Brommer, Executive Director, IGA, presented on the global dissemination of the UNFC geothermal energy specifications and provided an update on the joint IGA, International Renewable Energy Agency (IRENA) and World Bank Energy Sector Management Assistance Program (ESMAP) Project. Ms. Sulamith Kastl, Federal Institute for Geosciences and Natural Resources of Germany (BGR), Nicaragua, delivered a presentation on Promoting UNFC Geothermal Specifications to governmental institutions in Central America. Mr. Harmen Mijnlief, Geological Survey of The Netherlands (TNO) provided an update on the status of application of the UNFC geothermal specifications in the Netherlands.

61. It was noted with appreciation that the members of the IGA Reserves Committee Working Group support the development and application of UNFC to geothermal energy.

62. Mr. Michael McCurdy, member, Renewable Energy Working Group, presented an update on the application of UNFC to bioenergy and the interest from emerging stakeholders.

63. Since the publication of the Specifications for the application of UNFC to Bioenergy Resources, the Bioenergy Sub-group has been stood down and its key members (Ms. Raffaella Cristianetti, Mr. Mike McCurdy and Mr. James Primrose) are now integrated into the Renewable Energy Working Group.

64. Mr. Jeremy Webb, Challenge Institute and Chair of the Solar Energy Sub-group, presented the draft specifications for application of UNFC to solar energy (ECE/ENERGY/GE.3/2019/9).

65. The members of the Solar Energy Sub-group are: Mr. Jeremy Webb (Challenge Institute and Chair), Mr. Adrian Whiteman (International Renewable Energy Agency), Mr. Anteneh Dagnachew (PBL Netherlands Environment Agency), Mr. Axel Gunaltun (Independent Classification Specialist), Mr. Boris Lopicich (National Congress of Chile), Ms. Carina Paton (CDH Energy Corporation), Mr. Chris Freear (Sustainability Technology Specialist), Mr. David Donnelly (Mazars LLP), Mr. David Gernaat (PBL Netherlands Environment Agency), Mr. David Renne (International Solar Energy Society), Mr. Emmanuel Liberelle (Total), Mr. Fred Morse (Abengoa Solar), Mr. Lado Kurdgelashvili (University of Delaware), Ms. Lauren Weir (International Development Classification Specialist), Mr. Linus Mofor (United Nations Economic Commission for Africa), Ms. Long Seng To (Loughborough University), Mr. Manajit Sengupta (National Renewable Energy Laboratory), Ms. Monica Oliphant (Monica Oliphant Research), Mr. Vivek Mittal (Millennium Resources Strategies Limited), and Mr. Yacob Mulugetta (University College London). It was noted that Ms. Jenny Chase (Bloomberg New Energy Finance) and Mr. Kamel Ben Naceur (Abu Dhabi National Oil Company (ADNOC)) are no longer members. The Expert Group thanked both experts for their contribution to the work of the Solar Energy Sub-group.

66. Mr. Markus Klingbeil (Shell and Chair, Wind Energy Sub-group) presented the draft wind energy specifications (ECE/ENERGY/GE.3/2019/8).

67. The members of the Wind Energy Sub-group are: Mr. Markus Klingbeil (Shell and Chair), Mr. Peter Eecen (ECN Wind Energy), Mr. Chris Freear (University of Canterbury), Mr. Taylor Geer (DNV GL), Mr. Tom Lefeber (Shell), Professor James Manwell (Wind Energy Center, University of Massachusetts), Mr. Sathyajith Mathew (University of Darussalam), Mr. Holger Matthiesen (E.ON), Mr. James Primrose (BP Alternative Energy), Mr. Daran Rife (DNV GL) and Mr. Gorkem Teneler (Verk Enerji Teknolojileri).

68. Professor Gioia Falcone provided an update on behalf of Mr. Dnieper Cruz (Imperial College, London) on the status of the work to apply UNFC to hydropower. A Hydropower Sub-group has recently been established. The representative of Malawi offered to identify a suitably qualified expert to potentially lead and/or contribute to the Hydropower Sub-group.

69. The Expert Group noted with appreciation the work of the Renewable Energy Working Group, including its Sub-groups on Geothermal, Bioenergy, Solar, Wind and Hydropower, and reviewed the draft specifications for application of UNFC to solar energy (ECE/ENERGY/GE.3/2019/9) and the draft specifications for application of UNFC to wind energy (ECE/ENERGY/GE.3/2019/8).

70. The Expert Group approved the specifications for application of UNFC to solar energy and, subject to the document approval procedure agreed at the fifth session of the Expert Group (ECE/ENERGY/GE.3/2014/2, paragraph 97) being followed, recommended their endorsement by the Committee on Sustainable Energy.

71. The Expert Group approved the specifications for application of UNFC to wind energy and, subject to the document approval procedure agreed at the fifth session of the Expert Group (ECE/ENERGY/GE.3/2014/2, paragraph 97) being followed, recommended their endorsement by the Committee on Sustainable Energy.

72. The Expert Group requested the Working Group to continue its work to develop draft specifications for hydropower and marine energy.

73. The Expert Group noted with appreciation the increasing application of UNFC in the geothermal and bioenergy sectors. The Expert Group requested that the Bureau ensure cooperation on application of the geothermal specifications with the UNFC-AMREC initiative. The Expert Group further noted the various workshops and training courses organized by the Geothermal Sub-group under the leadership of the International Geothermal Association, IRENA and World Bank ESMAP. The Expert Group requested the Working Group to support development of case studies for application of UNFC and UNRMS as it evolves to renewable energy resources and submit them to the eleventh session.

(f) Nuclear fuel resources

Documentation: ECE/ENERGY/GE.3/2019/6 – Concept Note – The Role of Nuclear Energy in Sustainable Development: Entry Pathways *dated 15 February 2019*

74. Mr. Julian Hilton, Interim Chair, Nuclear Fuel Resources Working Group, provided an update on the work of the Working Group.

75. A panel with Dr. King Lee (WNA), Mr. Federick Reitsma (IAEA (via webex)), Ms. Luminita Grancea (Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency (NEA)), Mr. Hussein Allaboun (Jordanian Uranium Mining Company (JUMCO), Jordan), Dr. Jiri Muzak (State Enterprise Diamo, Czech Republic), Mr. Dennis Mwalongo (Tanzania Atomic Energy Commission (TAEC), United Republic of Tanzania), and moderated by Mr. Julian Hilton, discussed the concept for a new report on “The Role of Nuclear Energy in Sustainable Development: Entry Pathways” (ECE/ENERGY/GE.3/2019/6).

76. The current members of the Working Group are: Mr. Julian Hilton (Interim Chair), Mr. Hussein Allaboun (JUMCO), Mr. Tunde Arisekola (Nigerian Geological Survey Agency (NGSA)), Mr. Andrew Barrett (Geoscience Australia), Mr. Jean René Blaise (Consultant), Mr. Cassius Chiwambo (Malawi), Mr. Phillipe Costes (WNA), Ms. Luminita Grancea (NEA), Mr. David Hess (WNA), Mr. King Lee (WNA), Mr. Luis Lopez (National Atomic Energy Commission (CNEA), Argentina), Mr. Jiri Musak (Diamo), Mr. Dennis Mwalongo (TAEC), Mr. Federick Reitsma (IAEA), Mr. Li Shengxiang (China National Nuclear Corporation (CNNC)), Mr. Bradley Van Gosen (United States Geological Survey (USGS)), Ms. Alike Van Heek (IAEA), and the Expert Group Secretary.

77. Following review of the Concept Note on “The Role of Nuclear Energy in Sustainable Development: Entry Pathways” (ECE/ENERGY/GE.3/2019/6), the Expert Group requested the Nuclear Fuel Resources Working Group to prepare the full report in consultation with all relevant stakeholders and submit it to the eleventh session.

78. The Expert Group noted with appreciation the various workshops organized on application of UNFC to nuclear fuel resources under the leadership of IAEA and in cooperation with WMA and the OECD-Nuclear Energy Agency. The Expert Group requested the Working Group to further update and/or develop specifications, guideline and case studies for application of UNFC and UNRMS to nuclear fuel resources and submit the documentation to the eleventh session.

(g) Injection projects

79. Ms. Karin Ask, Chair, Injection Projects Working Group, provided an update on the work since the ninth session.

80. The members of the Working Group are: Ms. Karin Ask (Statoil (Chair)), Ms. Michelle Bentham (British Geological Survey (BGS)), Ms. Maren Bjørheim (NPD), Mr. Simplicio Caluyong (PNOC-EC), Mr. Scott Frailey (Illinois State Geological Survey, United States), Mr. Wolf Heidug (KAPSARC), Mr. Martin Hubbig (OMV), Mr. Kris Piessens (Royal Belgian Institute of Natural Sciences and EFG) and Ms. Lesley Seldon (Shell).

81. The Expert Group recommended that case studies should be prepared by the Injection Projects Working Group to test application of UNFC and UNRMS to the injection projects specifications.

(h) Anthropogenic resources

82. Ms. Soraya Heuss-Aßbichler, Lead, MINEA Working Group IV and member of the Anthropogenic Resources Working Group, provided an update on the activities of the Working Group.

83. The members of the Anthropogenic Resources Working Group are: Mr. Ulrich Kral (Vienna University of Technology), Chair, Ms. Soraya Heuss-Aßbichler (Ludwig-Maximilians-Universität), Mr. Sigurd Heiberg (Petrad), Mr. Julian Hilton (Aleff Group), Mr. Zoltán Horváth (Geological and Geophysical Institute of Hungary (MFGI)), Mr. Joachim Krook (Linköping University, Sweden), Mr. David Laner (University of Kassel, Germany), Mr. Felix Müller (Federal Environment Agency, Germany), Ms. Sandra Müller (University of Applied Sciences and Arts Northwestern Switzerland), Mr. Mohamed Osmani (Loughborough University), Mr. Mark Simoni (Norwegian Geological Survey), Professor Julia Stegemann (University College London), Ms. Katalin Szabó (MFGI), Mr. Patrick Wäger (Swiss Federal Laboratories for Materials Science and Technology (Empa)), Ms. Andrea Winterstetter (Flemish Institute for Technological Research) and Mr. Dominik Wittmer (EC Joint Research Centre).

84. The Expert Group noted with appreciation the work of the Anthropogenic Resources Working Group and requested the Working Group to support the development of case studies for application of UNFC and UNRMS to anthropogenic resources.

(i) Commercial aspects and financial reporting

Documentation: ECE/ENERGY/GE.3/2019/7 – The United Nations Framework Classification for Resources (UNFC) Applied to Commercial Assessments – draft considerations *dated 24 April 2019*

85. Mr. Sigurd Heiberg, Chair, Commercial Working Group, provided an update on the development of UNFC guidelines on commercial assessments of projects (ECE/ENERGY/GE.3/2019/7).

86. The members of the Commercial Working Group are: Mr. Sigurd Heiberg (Petrad and Chair), Ms. Kathryn Campbell (Sullivan & Cromwell LLP), Mr. Danny Trotman (EY), Ms. Carolina Coll (International Finance Corporation (IFC)), Mr. David Elliott, (Consultant), Mr. Julian Hilton (Aleff Group), Mr. Michal Lynch-Bell (Kaz Minerals), Mr. Nick Stansbury (Legal and General Investment Management) and Mr. Steve Griffiths (ERCE).

87. Ms. Kathryn Campbell, Sullivan & Cromwell LLP, provided an update on climate change reporting developments. Mr. Craig Burns, Alberta Securities Commission, provided an update on regulatory requirements in the Canadian context. Mr. Tim Craig, IFRS Foundation, provided an update via WebEx on the International Accounting Standards Board's (IASB) extractive reserve and resource reporting activities. The Board is gathering evidence to help it decide whether to start a project to develop proposals to replace or amend International Financial Reporting Standard (IFRS) 6 Exploration for and Evaluation of Mineral Resources. This Project was added to the Board's active research programme in 2018.

88. The Expert Group reviewed the draft document "UNFC applied to Commercial Assessments – draft considerations" (ECE/ENERGY/GE.3/2019/7), broadly supported the conclusions and recommendations, and requested the Commercial Working Group to finalize the document in cooperation with the Bureau and issue it for public comment.

89. Noting that an IFRS for extractives is on the active research agenda of the International Accounting Standards Board (IASB), the Expert Group requested the Bureau, in cooperation with the Commercial Working Group, to ensure the IASB and the IFRS

Foundation are fully informed on the status of development and application of UNFC worldwide.

(j) Competent Person and evaluator qualifications

90. Mr. Vitor Correia, Chair, Competent Person Task Force and EFG, provided an update on the activities and also the recommendations of the Task Force, notably to (i) reinforce the transparency, reliability and consistency of UNFC for the classification and management of resources; and (ii) to seek alignment between UNFC's Competent Person Requirements and Options for Resources Reporting and existing competency frameworks prescribed by relevant reporting standards.

91. The members of the Competent Person Task Force are: Mr. Vitor Correia (EFG and Chair), Ms. Ruth Alligton (PERC), Mr. Oliver Bonham (TG-GGP-IUGS), Ms. Gerlee Bayanjargal (CRIRSCO), Mr. Frank Denelle (independent expert and Chair, Renewable Energy Working Group), Mr. Roger Dixon (CRIRSCO), Mr. Hendrik Falck (Canada), Ms. Isabel Fernandez (EFG), Mr. Aaron Johnson (AIPG), Mr. Michael Neumann (EFG), and Mr. Ed Swindell (Geological Society of South Africa (GSSA)).

92. The Expert Group noted with appreciation the work of the Competent Person Task Force and its recommendations to ensure transparent, reliable and consistent application of UNFC and the possible inclusion of these recommendations in any future update of the specifications. The Expert Group requested the Task Force to focus on capacity-building and implementation and training while coordinating its work with the other Working Groups and the Bureau on the establishment of a Network on Professional Development for UNFC practice.

(k) Other potential applications

93. Mr. Marco Petitta, Chair, Groundwater Working Group provided details on the establishment of the Groundwater Working Group and planned future activities.

94. The current members of the Groundwater Working Group are: Professor Marco Petitta (EFG, Sapienza University of Rome and Chair), Mr. Malis Absametov (Institute of Hydrogeology and Geoecology, Kazakhstan), Dr. Hendrik Coetzee (Council for Geoscience, South Africa), Ms. Narmina Garayeva (Geneva Business School), Mr. Klaus Hinsby (Geological Survey of Denmark and Greenland (GEUS) and EuroGeoSurveys), Mr. Bob Hoogendoorn (EFG and Deltares), Mr. Oleksii Netskyi (State Commission of Ukraine on Mineral Resources), Dr. Kevin Parks (Alberta Energy Regulator| and Alberta Geological Survey, Canada), Dr. Jörg Reichling (Federal Institute for Geosciences and Natural Resources, Germany), Professor Georgii Rudko (State Commission of Ukraine on Mineral Resources), Dr. Teodóra Szöcs (Mining and Geological Survey of Hungary and International Association of Hydrogeologists (IAH)), Mr. Alexey Tudvachev (St. Petersburg State University, Russian Federation), Dr. Natalia Vinograd (St. Petersburg State University, Russian Federation). Additional members are being identified.

95. The Expert Group noted the establishment of the Groundwater Working Group and requested that it start work on development of specifications for application of UNFC and UNRMS to groundwater and provide an update to the eleventh session.

XII. Social and environmental considerations in the United Nations Framework Classification for Resources and the United Nations Resource Management System (agenda item 10)

96. Mr. David Elliott (Chair, Environmental and Social Considerations Task Force), presented an update on the activities of the Task Force.

97. The members of the Task Force are: Mr. David Elliott (independent expert and Chair), Ms. Kathryn Campbell (Sullivan & Cromwell LLP), Mr. Rodrigo Chanes Vicente (EC DG GROWTH), Mr. Julio Claudeville (Barrick Argentina), Dr. Hockguan Chong (GMP Environmental Consultants, Malaysia), Mr. Steve Griffiths (ERCE), Mr. Sigurd Heiberg (Petrad), Mr. Julian Hilton (Aleff Group), Ms. Karen Jenni (USGS), Mr. Michael Lynch-Bell (KAZ Minerals), Mr. Luis Lopez (CNEA), Ms. Sarah Magnus (Deloitte, South Africa), Mr. Luis Martins (Colt Resources, Portugal), Ms. Carrie McClelland (Colorado School of Mines, United States), Mr. Dennis Mwalongo (Tanzania Atomic Energy Commission), Dr. Thomas Schneider (Ryerson University, Canada), Mr. Claudio Virues (Alberta Energy Regulator, Canada) and Ms. Yang Hua (CNPC).

98. The Expert Group recommended that detailed UNFC and UNRMS specifications, guidelines and best practices for social and environmental assessments to ensure alignment with the SDGs be developed and draft documentation be submitted to the eleventh session.

XIII. Application of the United Nations Framework Classification for Resources in different geographical contexts (agenda item 11)

99. Mr. Milan Grohol, Policy Officer, EC D.G. GROW, provided an overview of on-going actions at EU level under the “UNFC and UNRMS for Europe initiative”. He underlined the need for harmonized data at the EU level for primary and secondary raw materials (mining waste, landfills) and provided the results of consolidation of data on critical raw materials required for batteries. Ms. Teresa Ponce de Leão (Chair of Executive Board, LNEG, Portugal and Past President, EuroGeoSurveys) delivered a presentation on the Portuguese experience in implementation of UNFC. Mr. Zoltan Horvath, Mining and Geological Survey of Hungary and EuroGeoSurveys, provided an update on the activities of EuroGeoSurveys on mineral resource data harmonization.

100. Mr. Paul Msoma (Head, African Minerals Development Centre, AUC) presented an update on the African Mining Vision (AMV) and the importance of the UNFC-African Mineral and Energy Resources Classification and Management System (AMREC)-Pan-African Resources and Reserves Reporting Code (PARC) System for sustainable development of mineral and energy resources in Africa. Mr. Tunde Arisekola (NGSA and member of the AMREC Working Group), provided an update on the development of the UNFC-AMREC-PARC System under the initiative “UNFC and UNRMS for Africa”. He also provided details of the workshop organized by AUC in Geneva, 29-30 April 2019. Mr. Bob Felix Ocitti (Petroleum Authority of Uganda and member of the AMREC Working Group) delivered a presentation on the capacity-building requirements in resource management in Africa and the challenges faced.

101. On behalf of Professor Georgii Rudko, Chairman, State Commission of Ukraine on Mineral Resources, Mr. Oleksii Netskyi and Mr. Stanislav Lytvyniuk provided an update on the Ukrainian classification and its adaptation to UNFC.

102. Dr. Dhiti Tulyatid (CCOP Technical Secretariat) provided an update on the activities related to UNFC conducted by CCOP.

103. The Expert Group noted the progress made by the “UNFC and UNRMS for Europe” initiative to harmonize classification and management of raw materials at EU level under the European Commission’s Raw Materials Initiative and the encouraging results of the EU Battery Initiative. The Expert Group noted the increasing use of UNFC by a number of Horizon 2020 projects and the UNFC-focussed workshop organized as part of the EU Raw Materials Week 2018. The Expert Group requested that the draft guidance document for application of UNFC and UNRMS in the European context be submitted to the eleventh session.

104. The Expert Group noted the progress made by the “UNFC and UNRMS for Africa” initiative to develop the UNFC African Mineral and Energy Resource Classification and Management System (UNFC-AMREC) aligned to the Africa Mining Vision under the leadership of the African Union Commission’s AMREC Working Group. The Expert Group

noted the workshops and meetings organized under this initiative and requested the draft UNFC-AMREC documentation be submitted to the eleventh session for information.

XIV. International Centres of Excellence and extrabudgetary projects for implementation of the United Nations Framework Classification for Resources and the United Nations Resource Management System (agenda item 12)

105. A panel discussion moderated by Mr. Sigurd Heiberg (Petrad) discussed the need for stable platforms for capability-based capacity building in sustainable resource management. The possibilities for hosting International Centres of Excellence on Sustainable Resource Management were discussed and debated by the Director of the ECE Sustainable Energy Division, Ms. Yang Hua (CNPC), Mr. Ulises Neri (CNH Mexico), Professor Gbenga Okunlola (President, Geological Society of Africa (GSAf)), and Dr. Dhiti Tulyatid (CCOP Technical Secretariat).

106. Mr. Viktor Badaker, ECE Sustainable Energy Division, provided an update on the UN Development Account (UNDA) project on integrated energy and water resource management in support of sustainable development in South-east Europe and Central Asia and the project funded by the Russian Federation on improving national capacities of Central Asian countries to harmonize and implement an internationally applicable system of classification and sustainable management of energy and mineral resources.

107. The Expert Group noted the interest in establishing national and/or regional centres of excellence on sustainable resource management worldwide based on UNFC and UNRMS, with the technical support of ECE, and requested the Bureau and Working Groups to support and engage in the initiatives and provide an update during the eleventh session. The Expert Group agreed that any such centres that are established should report to the Expert Group annually to ensure a harmonized and coordinated approach in their operation, and for sharing of experiences, notwithstanding that the work and focus of each centre would be tailored to national and regional requirements. The Expert Group requested the Bureau, in coordination with a Task Force on International Centres of Excellence in Sustainable Resource Management, to develop with urgency a design and draft guidelines for the establishment, operation, funding and oversight of the centres. These should ensure that amongst other issues the centres are sustainable, dynamic and operate efficiently at least cost. This should also be coordinated with the operating procedures for other ECE International Centres of Excellence.

108. The Expert Group noted with appreciation the ongoing extrabudgetary projects that support the application of UNFC, in particular: (a) Improving national capacities of Central Asian countries to harmonize and implement internationally applicable system of classification and sustainable management of energy and mineral resources (funded by the Russian Federation); (b) Integrated energy and water resource management in support of sustainable development in South-East Europe and Central Asia (funded by UNDA); and requested members of the Expert Group to continue to support and engage in the projects.

XV. Women and diversity in resource management (agenda item 13)

109. Ms. Rosalyn Park, Director, The Advocates for Human Rights (via WebEx), delivered a presentation on promoting gender, diversity and inclusion in the Oil, Gas and Mining Extractive Industries.

110. The Expert Group noted the powerful and positive benefits of diversity and inclusion in resource management and recommended the Bureau to monitor developments in improving the participation of women in resource management and to review the diversity and inclusiveness of the Expert Group's sub-groups. The Expert Group requested the Bureau and the SDGs Delivery Working Group to consider including inputs from similar activities in the development of UNRMS and to update the eleventh session accordingly.

XVI. Education and outreach (agenda item 14)

Documentation: EGRM-10/2019/INF.6 – Unofficial room document: Promotion and outreach activities of the Communications Working Group in 2018–2019 dated 24 April 2019

111. Ms. Carolina Coll, Chair, Communications Working Group, provided an update on the work and activities of the Working Group since the ninth session of the Expert Group.

112. The membership of the Communications Working Group is: Ms. Carolina Coll (IFC-World Bank and Chair), Professor. George Ajdanlijsky (University of Mining and Geology "St. Ivan Rilski", Bulgaria), Mr. Per Blystad (Petrad), Mr. Benoit Charpentier (Total), Ms. Isabel Fernandez (EFG), Ms. Tana Garcia Lastra (Corporación de Reservas Estratégicas de Productos Petrolíferos (CORES)), Mr. Sigurd Heiberg (Petrad), Mr. David MacDonald (Chair, Expert Group on Resource Management), Ms. Jennifer McCoy (EY), Mr. Ulises Neri (CNH Mexico), Ms. Cristina Robinson (SPE Swiss Section), Dr. Thomas Schneider (Ryerson University), Mr. Danny Trotman (EY), Dr. Dhiti Tulyatid (CCOP Technical Secretariat), Ms. Yang Hua (CNPC) and Secretary of the Expert Group.

113. The Expert Group noted with appreciation the activities and future work plans of the Communications Working Group and, in particular, supported the plans to prepare digital documents and create mobile applications (apps) to facilitate application of UNFC and UNRMS.

114. The Expert Group recommended that an educational and training session on UNFC and UNRMS be organized on the first day of the eleventh session. 115. The Expert Group requested the Communications Working Group to engage in the revamp of UNFC and, in particular, the work to engage with the new stakeholders (statistics users, developing countries, the renewable energy sectors, etc.) to clarify specific requirements of a classification system to meet their needs.

XVII. Cooperation with other organizations and entities (agenda item 15)

115. Mr. Il Seok Oh, Institute for National Security Strategy, Republic of Korea, delivered a presentation on lessons learnt from repurposing abandoned coal mines in the Republic of Korea.

116. Mr. Sukmandaru Prihatmoko, Chairman, Indonesian Association of Geologists (IAGI), provided an update on the Indonesian Resource Management System.

117. Mr. Edmund Nickless, International Union of Geological Sciences (IUGS), provided an update on the activities of IUGS and Resourcing Future Generations (RFG), which is an IUGS initiative aimed at meeting the multigenerational needs for raw materials, energy and water while ensuring social equity. The IUGS representative underlined the wish to cooperate closely with the Expert Group.

118. Dr. Andreas Hucke, DMT, presented an overview of the Certification System for Sustainable Production and Processing of Raw Materials (CERA).

119. The Expert Group requested the Bureau to ensure cooperation and sharing of information on the work of the Expert Group with the UN Environment International Resource Panel and other bodies in the UN system working on issues related to resources, including their governance.

120. The Expert Group noted the increased cooperation with various organizations and requested an update be provided to the eleventh session.

XVIII. Work plan for 2018–2019 and draft work plan for 2020–2021 (agenda item 16)

Documentation: ECE/ENERGY/GE.3/2019/7 – Draft Work Plan for the Expert Group on Resource Management for 2020–2021 *dated 15 February 2019*

121. Following a detailed review, the Expert Group noted that it has made significant progress in the implementation of its work plan for 2018–2019.

122. The Expert Group recommended that its draft Work Plan for 2020–2021 (ECE/ENERGY/GE.3/2019/4), subject to the changes agreed during the meeting, be submitted to the twenty-eighth session of the Committee on Sustainable Energy for endorsement and to the Executive Committee for subsequent approval.

XIX. Other business (agenda item 17)

123. Following discussion and careful review and in the light of the expanded scope of application of UNFC and UNRMS, the Expert Group agreed that its eleventh session needs to be held over five days, including an educational and training session on UNFC and UNRMS, but with an option to reduce the total number of days commensurate with the required agenda items. The provisional dates for the eleventh session are 20–24 April 2020 in Geneva, Switzerland.

124. No other issues were raised.

XX. Adoption of conclusions and recommendations (agenda item 18)

Documentation: EGRM-10/2019/INF.1 – Unofficial room document: Draft Conclusions and recommendations for the Expert Group on Resource Management tenth session *dated 16 April 2019*

125. The conclusions and recommendations were adopted and are included under the relevant agenda items.

XXI. Adoption of the report and close of the meeting (agenda item 19)

126. The report of the meeting was adopted subject to any necessary editing and formatting.
