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Expert Group on Resource Classification

Ninth session

Geneva, 24-27 April 2018

Report of the Expert Group on Resource Classification

I. Introduction

1. The ninth session of the Expert Group on Resource Classification was held on 24 to 27 April 2018.¹
2. This report summarizes the discussions on the work of the Expert Group at its ninth session. All the documents and presentations of the ninth 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, Austria, Azerbaijan, Belgium, Canada, Croatia, Czech Republic, Denmark, Finland, France, Greece, Georgia, Germany, Hungary, Ireland, Italy, Kazakhstan, Kyrgyzstan, Netherlands, Norway, Poland, Portugal, Russian Federation, Serbia, Slovakia, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland and United States of America.
4. Experts from Algeria, Argentina, Australia, Brazil, Cameroon, Chad, China, Republic of the Congo, Cote d'Ivoire, Democratic Republic of the Congo, Ghana, Haiti, India, Indonesia, Japan, Jordan, Kuwait, Madagascar, Mexico, Mongolia, Morocco, Mozambique, Namibia, Niger, Nigeria, the Philippines, Qatar, Republic of Korea, Saudi Arabia, South Africa, Sudan, Thailand and Uganda participated under Article 11 of the Commission's Terms of Reference.

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=47092>.



5. From the United Nations system and Specialized Agencies, representatives of the United Nations Economic Commission for Africa (ECA), International Atomic Energy Agency (IAEA) and International Labour Organization (ILO) attended. Representatives from the European Commission (EC), represented by the EC Directorate-General (D.G.) for Internal Market, Industry, Entrepreneurship and SMEs (D.G. GROWTH), D.G. for Research & Innovation, D.G. Eurostat and the 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 Minerals and Geosciences Centre (AMGC), EuroGeoSurveys (EGS), International Energy Agency (IEA), International Energy Forum (IEF), International Finance Corporation – World Bank Group, International Sustainable Energy Organization (ISEO) and Organization of African Geological Surveys (OAGS).

7. Representatives of the following non-governmental organizations participated: American Institute of Professional Geologists (AIPG), Asabe Shehu Yar'Adua Foundation, Association de l'Education Environnementale pour les Futures Generations (AEEFG), Bureau pour la croissance intégrale et la dignité de l'enfant, Centre for International Sustainable Development Law, Centre for Mineral Technology (CETEM), Committee for Mineral Reserves International Reporting Standards (CRIRSCO), CR-Network Ghana, Entwicklungsfonds Seltene Metalle (ESM) Foundation, European Association of Geoscientists and Engineers (EAGE), European Federation of Geologists (EFG), European Disability Forum, Federation of European Materials Societies (FEMS), Foundation ZAR, Fraunhofer Institute, Geological Society of Africa (GSAf), Institute of Management Accountants (IMA), International Geothermal Association (IGA), International Association for Political Science Students, International Chamber of Commerce (ICC) Environment & Energy Commission, International Union of Geological Sciences (IUGS), Jeunes Volontaires au Service du Monde, Knowledge Transfer Network Ltd., MindMe International, Nature Cares, OASIS Association, PETRAD, Regional Centre for International Development Corporation, Scientific Youth Forum for the Renaissance of Community, SEG Civil Society Support Center, 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), World Resources Forum Association (WRFA) and World Petroleum Council (WPC).

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

III. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.3/2018/1

9. The provisional agenda as contained in ECE/ENERGY/GE.3/2018/1 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.

11. The Bureau 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. Hubert Schwarz (Poland),

Mr. Radoslav Vukas (Serbia), Ms. Múcella 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. Frank Mugyeni (AUC), Mr. Fatih Birol (IEA), Mr. Roger Dixon (CRIRSCO), Professor Gioia Falcone (IGA), Mr. Bernard Seiller (SPE), Mr. Adichat Surinkum (Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)), Ms. Adrienne Hanly (IAEA), 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 Classification) as Vice-Chairs.

12. Sweden advised it would confirm its nomination of Ms. Erika Ingvald, Geological Survey of Sweden, in due course. The Expert Group agreed to Ms. Ingvald joining the Bureau in the capacity of Vice-Chair as and when the official nomination from Sweden is received.

13. The ECE secretariat highlighted that the process of electing the Bureau can include the nomination of non-governmental candidates and nominations by other than ECE member States but that in all cases nominations are vetted by the existing Bureau before the elections.

14. The Expert Group noted with appreciation the work of the Bureau elected at the seventh session and acknowledged the dedication, time and contribution of the outgoing members: Ms. Karin Ask (Statoil), Mr. David Elliott (Geosgil Consulting), Mr. Michael Lynch-Bell (KAZ Minerals), Mr. James (Jim) Ross (independent expert), Mr. Dominique Salacz (SPEE and Evolution Resources), Mr. Daniel Trotman (EY), and Mr. Narendra Verma (ONGC Videsh).

V. Opening remarks (agenda item 3)

15. The ECE Executive Secretary welcomed the participants to the meeting. She underlined the current challenges to human progress such as rising population, constraints on resources and climate change. She asserted that the world can find solutions as people interact through a global, interconnected economy. New approaches, methods and initiatives are shared that are transforming the world. The world has moved from warnings of energy and raw material depletion to new abundance. Renewable energy resources, which up until some years ago were not taken seriously, are becoming mainstream. She noted that significant challenges remain. Climate change continues to threaten vast populations. Water, land and forest resources, all of which have a close connection to climate, are severely constrained. Desertification is a reality in many parts of the world. It takes its toll not only on the land and water but also on food availability. She pointed out that that innovation and technological transformation will respond to the challenges. The 2030 Agenda for Sustainable Development (2030 Agenda), which calls for transforming our world in itself reflects optimism. In closing, she noted that the Expert Group is well placed to be part of this dialogue of transformation and highlighted that Sustainable Resource Management is crucial for achieving the 2030 Agenda. Transforming the United Nations Framework Classification for Resources (UNFC) into a tool for governments and industry to manage resources sustainably is more pressing than ever before.

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

17. 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.

18. 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.

19. Since the eighth session, the Bureau has conducted its work through eight audioconferences, one face-to-face meeting and regular e-mail correspondence. He noted that the minutes of the Bureau meetings are available on the ECE website.

20. The Chair thanked the Bureau members and their alternates for their work, time and commitment since the eighth 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, 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 200 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.

21. 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 (agenda item 4)

22. The Chair provided a summary of the workshop held on 24 April 2018 which included presentations on UNFC and the transformation required via-a-vis the 2030 Agenda. To be in line with the new requirements, UNFC will need to add additional layers on issues related to resource progression and management. Aspects of the required transformation were elaborated by presentations on social and environmental considerations, SDGs Delivery, and minerals, petroleum, and renewable energy resource management. A special session of the workshop was held in cooperation with EIT RawMaterials, ESM Foundation and the European Cooperation in Science and Technology (COST) Mining the European Anthroposphere (MINEA) Project. The event was attended by 125 participants, of which 25 were female. The final programme and presentations delivered at the workshop are available on the ECE website.²

² <http://www.unece.org/index.php?id=41248>.

23. Interest was expressed by the participants in the event being repeated as part of the Expert Group's tenth 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 Classification (agenda item 5)

24. The Director, ECE Sustainable Energy Division, provided an update on the relevant outcomes of the twenty-sixth session of the Committee on Sustainable Energy, September 2017. The Committee noted with appreciation the progress the Expert Group had made since its twenty-fifth session on delivering on its mandated activities and work plan for 2016-2017, in particular, the significant work that has been undertaken to broaden the application of UNFC to encompass renewable energy and anthropogenic resources. The Committee approved the name change to the United Nations Framework Classification for Resources (UNFC). The Committee approved the Expert Group's work plan for 2018-2019.

25. The following documents were endorsed by the Committee at its twenty-sixth session:

- (a) Work plan of the Expert Group on Resource Classification for 2018-2019;
- (b) Specifications for the application of UNFC to Bioenergy Resources.

26. The Committee noted the increased significance in managing waste under the SDGs and requested the Expert Group to explore possibilities to develop UNFC guidelines and best practices to manage energy and material recovery from waste projects.

27. The Director also drew attention to the cross-cutting nature of the activities of the Sustainable Energy Division and encouraged the Expert Group to work and cooperate with other Groups of Experts where synergies were evident. He provided an overview of the activities on methane management, the work to develop high performance standards for buildings, and the project on Pathways to Sustainable Energy. He encouraged close cooperation with the Group of Experts on Coal Mine Methane (CMM) and requested that UNFC guidelines for CMM be developed.

28. The Director emphasized that Sustainable Resource Management has now become one of the focus areas for ECE. Hence, the work of the Expert Group assumes greater significance. The transformation of UNFC into a comprehensive resource management system is one of the areas the Expert Group could focus on in the future.

29. The Director appreciated the focus of the array of working groups and task forces in transforming UNFC into a comprehensive resource management system. He also noted that most of the working groups are developing and proposing project concepts for extrabudgetary funding. He stressed that the Expert Group's activities have now expanded significantly such that many of the activities indicated in the work plan for 2018-2019 could only be realized with the support of extrabudgetary funding.

30. The Pathways to Sustainable Energy project under the leadership of the Committee on Sustainable Energy represents a unique opportunity for the Expert Group to explore the role of resource management in sustainable energy. The Expert Group requested direct involvement in the project as it develops over the biennium. In particular, the Expert Group would like to contribute with its experience on environmental and social issues. To this end, it was decided to nominate a Vice-Chair to represent the Expert Group in the project.

VIII. The role of the United Nations Framework Classification for Resources in managing the future socio-economic and technological landscape for energy and raw materials (agenda item 6)

31. The Director, Sustainable Energy Division, presented on the various global megatrends and technologies that are driving the transformation being seen in the energy and raw materials sectors. His remarks on “Implications of the coming transitions: decarbonization, dematerialization and digitalization” dwelt on the changes that are shaped by the 2030 Agenda and the Paris Agreement on climate change. He emphasized that this requires UNFC to transform and that the Expert Group should focus on development of a comprehensive resource management system that can help improve systemic efficiency in resource production and environmental performance.

32. Dr. Sun Xiansheng, Secretary General, IEF, delivered a presentation on “Balancing growth and transitions - Challenges and opportunities for energy security”. He noted that fossil fuels will still represent in the order of 61 per cent to 78 per cent of the primary energy mix by 2040 but that new technologies could reduce this dependence by 38 per cent by 2050. A balance of 50 per cent fossil fuels and 50 per cent renewable energy could be achieved before 2050. For this policy and technology cooperation will be key.

33. Mr. Nick Stansbury, Fund Manager, Legal & General Investment Management, delivered a talk on “Investments for the energy transition”. He brought into focus the additional capital that will be required to finance the energy transition, which could be in the order of USD 32 trillion. He said that there is a shift in terms of the debate and a need to integrate policy changes, and quantify future impacts today. Predicting the future of energy is very important to tackle the uncertainties in capital investments.

34. Mr. Igor Shpurov, First Vice-Chair, Expert Group and Director-General, State Commission of Mineral Reserves of the Russian Federation (GKZ), spoke about the “New ways of applying UNFC for harmonization of relations between the State and investor in producing countries”. He said that the policies for attracting investment in innovation, such as “digital mining” or the application of smart, next-generation processing power and Artificial Intelligence to optimize procedures for resource evaluation, recovery and management could gain significantly from a system such as UNFC. He noted that the revision of the mineral reserves classification system of the Russian Federation will allow full consistency with UNFC. He also stressed the need for establishment of a global institution of Competent Persons recognized by a global expert community.

35. Professor Georgy Krasnyansky, Head, Department of World Mineral Resources, MGIMO University, provided details of the Resource Classification Conference to be held at MGIMO University, Moscow, Russian Federation, 30-31 May 2018.

IX. Development, maintenance and application of the United Nations Framework Classification for Resources (agenda item 7)

Documentation: EGRC-9/2018/INF.2 – Unofficial Room Document: Technical Advisory Group Annual Report 2017–2018 dated 23 April 2018

36. 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 eighth session. He pointed out that the

Bureau approved the reconstitution of the Group in April 2017. The Technical Advisory Group will function as a coordinating group of all the sectoral Working Groups and will be represented by the Chairs of the sectoral Working Groups.

37. 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), Ms. Adrienne Hanly (Chair, Nuclear Fuel Resources Working Group), Mr. Sigurd Heiberg (Chair, Commercial Working Group), Mr. Ulrich Kral (Chair, Antropogenic Resources Working Group), Mr. Michael Neumann (Chair, Minerals Working Group), Mr. Satinder Purewal (Chair, Petroleum Working Group), Chair of the Expert Group and Secretary of the Expert Group.

38. The Expert Group thanked the members of the Technical Advisory Group for their ongoing work and support and expressed their appreciation to the outgoing members: Mr. Andrew Barrett, Ms. Vera Bratkova, Mr. Jan Bygdevol, Mr. Roger Dixon, Mr. John Etherington (Chair), Mr. Dominique Salacz, Mr. Alexander Shpilman, and Mr. Bradley Van Gosen.

39. The Expert Group noted 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 and review the development and revision of specifications, bridging documents and guidelines.

(a) Minerals

Documentation: ECE/ENERGY/GE.3/2018/8 – Draft proposal on developing specifications and guidelines for classification and subsequent management of mineral inventories *dated 6 April 2018*

40. Mr. Michael Neumann, Chair, Minerals Working Group, provided an overview of the activities of the Working Group. Following the Expert Group's recommendation made at the eighth session to establish a Minerals Working Group to look into the development of additional specifications, guidelines and case studies for application of UNFC to minerals, this group was constituted in 2017. The Working Group has developed a draft proposal for developing additional specifications and guidelines for a UNFC Minerals Management System, which will be aligned to the SDGs. In view of the substantial breadth of the activities, extrabudgetary funding will be sought for accomplishing most of the tasks.

41. The members of the Minerals Working Group are: Mr. Michael Neumann (EFG), 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. Phil Broadhurst (Consultant), Mr. Roger Dixon (CRIRSCO), Mr. Martin Fairclough (IAEA), Mr. Hendrik Falck (Geological Association of Canada),

Mr. Johan Gotsis (SST Aachen), Ms. Karen Hanghoj (EIT RawMaterials), Mr. Markku Iljina (Geoconsulting), Mr. Aaron Johnson (AIPG), Mr. Jan Kosmol (German Environment Agency), Mr. Kaj Lax (Geological Survey of Sweden), Mr. Mark Mihalasky (U.S. Geological Survey (USGS)), Mr. Sandor Mulsow (International Seabed Authority (ISA)), 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. Ernst-Bernhard Teigler (DMT), Mr. Harikrishnan Tulsidas (ECE) and Mr. Micha Zauner (UIT/General Atomics).

42. Mr. Andreas Hucke, DMT and representative of the Certification of Mineral Resource Recovery Chains (CERA) Project, provided an overview of the CERA Project.

43. The Expert Group noted the work of the Minerals Working Group and the proposal for the development of a comprehensive minerals management system with relevant specifications and guidelines based on UNFC classification scheme to all minerals as set out in ECE/ENERGY/GE.3/2018/8. The Expert Group requested the Working Group to cooperate with the SDGs Delivery Working Group to understand the requirements and scope of an integrated resources management tool and how it might relate to minerals. The Expert Group further requested the Working Group to study any of the proposed revisions to UNFC and prepare a recommendation on the possible need to revise the aligned minerals-related Bridging Documents and submit it to the tenth session.

(b) Petroleum

Documentation: ECE/ENERGY/GE.3/2018/9 – Draft input mechanism for the development of Specifications for the Application of UNFC to Petroleum: Application of UNFC for Integrated Resource Management for petroleum and total resources by National Oil Companies and government regulators *dated 8 February 2018*

ECE/ENERGY/GE.3/2018/11 – Case study on bridging from the Oil and Fuel Gas Reserves and Resources Classification of the Russian Federation to UNFC: Field A in West Siberia, Russian Federation *dated 8 February 2018*

44. Mr. Satinder Purewal, Chair, Petroleum Working Group, provided an update on the activities of the working group. Following the recommendation of the eighth session of the Expert Group to establish a Petroleum Working Group to look into the development of additional specifications, guidelines and case studies for application of UNFC to petroleum, this group was constituted in 2017. The vision of the Petroleum Working Group is to be the premier petroleum expertise repository for the Expert Group with the primary goal of achieving the SDGs through implementation of UNFC globally as a total resource classification and management system which can be used by a variety of interested entities to make policy and business decisions on energy. The Petroleum Working Group's mission is to proactively work with stakeholders in member States, develop UNFC petroleum specifications and guidelines, conduct pilot studies, hold workshops, promote uptake of UNFC in interested countries, and provide advice on the realization of the SDGs using UNFC.

45. Mr. Satinder Purewal provided details of the proposal for developing UNFC specifications and guidelines, based on current knowledge and inputs from planned workshops (ECE/ENERGY/GE.3/2018/9). He emphasized the need for extrabudgetary funding to ensure that the tasks are accomplished in a timely manner.

46. 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 (GKZ), Mr. Jan Bygdevoll (NPD), Mr. Simplicio Caluyong (CCOP), Ms. Narmina Garayeva (Independent Consultant), Mr. Olaf Klarner (EFG), Mr. Ulises Neri (CNH Mexico), Mr. Felix Bob Ocitti (Petroleum Authority of Uganda), Mr. Dominique Salacz (Evolution Resources), Mr. Alexander Shpilman (Research Institute, Tyumen), Mr. Narendra K. Verma (ONGC Videsh) and Ms. Yang Hua (CNPC).

47. Mr. Alexander Shpilman presented an overview of the case study on bridging from the Oil and Fuel Gas Reserves and Resources Classification of the Russian Federation to UNFC (ECE/ENERGY/GE.3/2018/11).

48. Mr. Christian Moya, National Hydrocarbons Commission (CNH), Mexico, provided details of the three phases of a UNFC pilot test programme for conventional and

unconventional resources in Mexico. In this context, a Workshop on UNFC will be held in Mexico in June 2018.

49. Mr. Bernard Seiller, Chair, SPE Oil and Gas Reserves Committee, provided a status report on the update of the Petroleum Resources Management System (PRMS). The update is progressing and the revised text of PRMS is due to be issued in July 2018.

50. Mr Jim Jenkins, Alberta Energy Regulator, Canada, provided an update on the Canadian Oil and Gas Handbook (COGEH) and the relevance for the work on UNFC. He noted the focus on environmental and social issues and proposed to provide more details at the tenth session of the Expert Group.

51. The Expert Group noted the work of the Petroleum Working Group as outlined in the proposal for the development of specifications and guidelines for application of UNFC to petroleum (ECE/ENERGY/GE.3/2018/9). The Expert Group requested the Working Group to cooperate with the SDGs Delivery Working Group to understand the requirements and scope of an integrated resources management tool and how it might relate to petroleum. The Expert Group also noted the case study on the application of UNFC to a project in West Siberia, Russian Federation (ECE/ENERGY/GE.3/2018/11) and requested the Working Group to support the development, of additional, similar case studies. The Expert Group further requested the Working Group to review any of the proposed changes to UNFC definitions and generic principles and prepare a recommendation on the possible need to revise the aligned petroleum-related Bridging Documents and submit it to the tenth session.

(c) Renewable energy resources

Documentation: ECE/ENERGY/GE.3/2018/6 – Draft Specifications for the application of the United Nations Framework Classification for Resources to Solar Energy *dated 6 April 2018*

52. Mr. Frank Denelle, Chair, Renewable Energy Working Group, provided an update on the activities of the Working Group. The renewable energy classification based on UNFC under development should assist with internal planning, investment decisions and external reporting. The generic renewable energy specifications, as well as specifications for geothermal energy and bioenergy are operational, and initial draft solar specifications have been developed.

53. The members of the Working Group are: Mr. Frank Denelle (Chair, independent expert), Ms. Leïla Ajjabou (INFACT Project), Mr. Benoit Charpentier (Total), Ms. Raffaella Cristianetti (DuPont), Professor Gioia Falcone (Cranfield University of Technology and IGA), Mr. Tom Lefeber (Shell), Mr. James Primrose (BP Alternative Energy), Mr. Bernard Seiller (Total), Mr. Jeremy Webb (Challenge Institute) and Secretary of the Expert Group.

54. Professor Gioia Falcone, Cranfield University, IGA, and Chair, Geothermal Sub-group, presented an update on the application of UNFC to geothermal energy resources. She also provided an update on behalf of IGA on its UNFC-related activities.

55. The Expert Group noted with appreciation the direct and in-kind support provided by IGA, Energy Sector Management Assistance Program (ESMAP) of the World Bank and the International Renewable Energy Agency (IRENA) to the work on geothermal energy and the application of UNFC thereon. A new project for application of the UNFC geothermal energy specifications involving three countries (a fourth country may be included later) for assessing their geothermal resources and inputting this data into the IRENA global geothermal atlas was outlined.

56. Ms. Annamária Nádor, Head of Division, Mining and Geological Survey of Hungary, provided an update on training on UNFC and geothermal case studies in the context of the Central and SE European region - DARLINGe Project in the Danube region.

57. The members of the IGA Reserves Committee Working Group support the development and application of UNFC to geothermal specifications.

58. Mr. James Primrose, Chair, Bioenergy Sub-group, presented an update on the application of UNFC to bioenergy. The bioenergy specifications were approved the Committee on Sustainable Energy in September 2017. He noted that BP's Sustainability Report for 2017 included a case study on the application of UNFC to bioenergy assets in Brazil³.

59. The members of the Bioenergy Sub-group are: Mr. James Primrose (BP Alternative Energy (Chair)), Mr. Doug Berven (POET), Mr. Benoit Charpentier (Total) Ms. Raffaella Cristianetti (DuPont), Mr. Richard Hamilton (CERES), Mr. James Leitheiser (Nike), and Mr. Michael McCurdy (IFC).

60. Mr. Jeremy Webb, Challenge Institute and Chair of the Solar Energy Sub-group, provided an update via a video presentation on the initial draft specifications for application of UNFC to solar energy (ECE/ENERGY/GE.3/2018/6).

61. The members of the Solar Energy Sub-group are: Mr. Jeremy Webb (Challenge Institute and Chair), Ms. Jenny Chase (Bloomberg New Energy Finance), Mr. David Donnelly (Mazars LLP), Mr. Chris Freear (Sustainability Technology Specialist), Mr. Axel Gunaltun (Independent Energy Classification Specialist, France), Mr. Lado Kurdgelashvili (University of Delaware), Mr. Boris Lopicich (National Congress of Chile), Mr. Vivek Mital (Millennium Resource Strategies Limited), Mr. Linus Mofor (ECA), Mr. Fred Morse (Abengoa Solar), Mr. Yacob Mulugetta (University College London), Mr. Kamel Ben Naceur (IEA), Ms. Monica Oliphant (Monica Oliphant Research), Ms. Carina Paten (CDH Energy Corporation), Mr. David Renné (International Solar Energy Society (ISES)), Mr. Manajit Sengupta (United States National Renewable Energy Laboratory (NREL)), Ms. Lauren Weir (independent development classification specialist), and Mr. Adrian Whiteman (IRENA).

62. Mr. Tom Lefeber (Shell and Chair, Wind Energy Sub-group) provided an update on the Sub-group. The plans for the development of the wind energy specifications were outlined.

63. The members of the Wind Energy Sub-group are: Mr. Tom Lefeber, Shell (Chair), Mr. Peter Eecen (ECN Wind Energy), Mr. Chris Freear (University of Canterbury), Mr. Taylor Geer (DNV GL), Professor James Manwell (Director, 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).

64. Mr. Frank Denelle provided an update on the status of the work to apply UNFC to hydropower and marine energy. Sub-groups for both are currently being established.

65. The Expert Group noted the work of the Renewable Energy Working Group and the development of the preliminary draft specifications for the application of UNFC to solar energy (ECE/ENERGY/GE.3/2018/6). The Expert Group requested the Working Group to prepare the final draft specifications for solar energy for review at the tenth session. The Expert Group further requested the Working Group to continue the work on wind energy

³ <https://www.bp.com/en/global/corporate/sustainability/climate-change/case-studies/quantifying-renewable-resources.html>

and to start work on the development of draft commodity-specific specifications for hydropower and marine energy.

66. The Expert Group noted the increasing application of UNFC to the geothermal and bioenergy sectors. The Expert Group requested the Working Group to support development of case studies and application examples and submit them to the tenth session.

(d) Nuclear fuel resources

67. Ms. Adrienne Hanly, Chair, Nuclear Fuel Resources Working Group, provided an update on the work of the Working Group, including the status of the development of a report on the application of UNFC for uranium and thorium resource management.

68. The current members of the Working Group are: Ms. Adrienne Hanly (IAEA and Chair), Mr. Hussein Allaboun (Jordan Uranium Mining Company (JUMCO)), Mr. Tunde Arisekola (Nigerian Geological Survey Agency (NGSA)), Mr. Andrew Barrett (Geoscience Australia), Mr. Cassius Chiwambo (Malawi), Mr. Roger Dixon (CRIRSCO), Mr. Michael Haschke (DMT GmbH & Co. KG), Mr. Luis Lopez (National Atomic Energy Commission (CNEA), Argentina), Mr. Bradles Van Gosen (USGS) and the Expert Group Secretary.

69. Mr. Julian Hilton, Aleff Group and Mr. Luis Lopez, CNEA, Argentina, provided an update on the draft document prepared by the Working Group on “Redesigning the uranium resource pathway”. Mr. Hussein Allaboun and Mr. Jiri Muzak (Czech Republic) also presented case studies from Jordan and Czech Republic respectively.

70. The Expert Group recommended that the Nuclear Fuel Resources Working Group present the draft report on the application of UNFC for uranium and thorium resource management to the tenth session. The Expert Group requested the Working Group to review possible changes to UNFC definitions and generic principles and prepare a report on the need for the development of additional nuclear fuel resource specifications and guidelines for sustainable management of nuclear fuel resources and submit it to the tenth session.

(e) Injection projects

71. Ms. Karin Ask, Chair, Injection Projects Working Group, provided an update on the work since the eighth session. Ms. Ask outlined three application examples: (a) Snøhvit long-term CO₂ solution project; (ii) Utsira Formation in the Norwegian North Sea including the Sleipner project; and, (iii) the upcoming U.S. Natural Gas Storage Facilities as presented by the US Energy Information Administration and based on publicly available information. The Working Group will explore if the UNFC specifications for injection projects and the SPE-Storage Resources Management System (SRMS) are sufficiently aligned to be mapped.

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

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

(f) Anthropogenic resources

Documentation: ECE/ENERGY/GE.3/2018/5 – Draft Specifications for the application of the United Nations Framework Classification for Resources to Anthropogenic Resources *dated 6 April 2018*

74. Mr. Ulrich Kral (Vienna University of Technology), Chair, Anthropogenic Resources Working Group, provided an update on the draft specifications for application of UNFC to anthropogenic resources (ECE/ENERGY/GE.3/2018/5). He noted that the specifications allow standardization to enable transparency and comparability of estimates on recoverable material quantities from secondary sources. The draft specifications underwent public review during July and August 2017, and 225 comments were received.

75. The members of the Anthropogenic Resources Working Group are: Mr. Ulrich Kral (Vienna University of Technology), Chair, Ms. Soraya Heuss-Aßbichler (Ludwig-Maximilians-Universität, Chair), Mr. Sigurd Heiberg (PETRAD), Mr. Julian Hilton (Aleff Group), Mr. Mark Howson (PERC), Mr. Zoltán Horváth (Geological and Geophysical Institute of Hungary (MFGI)), Mr. Daniel Müller (Norwegian University of Science and Technology), Mr. Felix Müller (Germany), Ms. Sandra Müller (Swiss Federal Laboratories for Materials Science and Technology (Empa)), Mr. Mark Simoni (Norwegian Geological Survey), Professor Julia Stegemann (University College London), Ms. Katalin Szabó (MFGI), Mr. Patrick Wäger (Empa), Ms. Andrea Winterstetter (Flemish Institute for Technological Research) and Mr. Dominik Wittmer (EC Joint Research Centre).

76. The Expert Group noted the work of the Anthropogenic Resources Working Group and reviewed the final draft anthropogenic resource specifications (ECE/ENERGY/GE.3/2018/5). The Expert Group approved the specifications for the application of UNFC to anthropogenic resources 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.

77. The Expert Group further requested the Working Group to support the development of case studies for application of UNFC to anthropogenic resources.

(g) Commercial aspects and financial reporting

78. Mr. Sigurd Heiberg, Chair, Commercial Working Group, provided an update on the development of UNFC guidelines on commercial assessments of projects.

79. The Commercial Working Group is currently under constitution. The members are: Mr. Sigurd Heiberg (PETRAD and Chair), Ms. Kathryn Campbell (Sullivan Cromwell LLP), and Mr. Danny Trotman (EY). More members are being added.

80. An updated was provided on financial reporting related to resource activities. Ms. Campbell focussed on cybersecurity risk disclosure, the impact of climate change and the continued challenge of resource progression. Mr. Trotman noted the project to develop an International Financial Reporting Standard for extractive activities is still on hold.

81. The Expert Group recommended the Commercial Working Group to review developments related to commercial aspects and assess how they are reflected in UNFC to support commercial assessments of projects. The Expert Group further recommended the Working Group to prepare guidelines to facilitate commercial assessments, including guidance on the use of categories of UNFC and submit it to the tenth session.

(h) Other potential applications

82. The Expert Group noted the continued interest in applying UNFC to coal mine methane (CMM) and groundwater and requested the Bureau to consider placing this on the agenda for discussion at the tenth session.

83. The Expert Group recommended that, subject to volunteers and extrabudgetary funds being identified, the Bureau explore the applicability of UNFC to other resources such as CMM and groundwater and that any findings be reported to the tenth session. Artisanal and small-scale mining should be considered for its unique characteristics.

84. Mr. Vitor Correia, Chair, Competent Person Task Force and President, EFG, delivered a presentation on the proposed UNFC competency framework. The Expert Group noted that a Guidance Note on Competent Person Requirements and Options for Resources Reporting⁴ was prepared and approved by the Expert Group in 2017.

85. 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 Consultant 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)).

86. To foster the use of UNFC as a classification and management system of natural resources, the Expert Group requested the Competent Person Task Force to update the Terms of Reference of the Task Force to facilitate alignment with existing competency frameworks.

X. Guidelines for accommodating social and environmental considerations in the United Nations Framework Classification for Resources (agenda item 8)

Documentation: ECE/ENERGY/GE.3/2018/3 – Draft guidance for accommodating environmental and social considerations in the United Nations Framework Classification for Resources *dated 8 February 2018*

ECE/ENERGY/GE.3/2018/4 – Accommodating Social and Environmental Considerations in UNFC: Concepts and Terminology *dated 8 February 2018*

87. Mr. Michael Lynch-Bell (KAZ Minerals), on behalf of the Chair, Environmental and Social Considerations Task Force, presented the draft guidance notes on (a) accommodating environmental and social considerations in UNFC (ECE/ENERGY/GE.3/2018/3) and (b) Concepts and Terminology (ECE/ENERGY/GE.3/2018/4) developed by the Task Force.

88. The recommendations in this report fall into three main areas: (a) high-level guidance on accommodating social and environmental considerations in UNFC; (b) the process for the development of detailed guidelines; and (c) clarification of terms related to socio-environmental factors.

⁴ https://www.unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/UNFC-Guidance-Notes/Guidance_Note_on_Competent_Person_Requirements_and_Options_for_Resource_Reporting.pdf

89. The members of the Task Force are: Mr. David Elliott (Geosgil Consulting (Chair)), Mr. John Atherton (International Council on Mining and Metals (ICMM)), Ms. Kathryn Campbell (Sullivan Cromwell LLP), Mr. Rodrigo Chanes Vicente (EC DG GROWTH), Mr. Julio Claudeville (Barrick Argentina), Mr. Hockguan Chong (GMP Environmental Consultants, Malaysia), Mr. Steve Griffiths (ERC Equipoise Ltd), 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 (South Africa), Mr. Luis Martins (Colt Resources), Mr. Dennis Mwalongo, Tanzania Atomic Energy Commission (TAEC), Mr. Michael Neumann (EFG), Mr. Thomas Schneider (Ryerson University, Canada), Mr. Slavko Solar (EGS) and Ms. Yang Hua (RIPED, CNPC).

90. A panel comprising Mr. Michael Lynch-Bell (moderator), Mr. Tom Schneider, Ms. Yang Hua and Mr. Julian Hilton discussed the application of the UNFC Guidelines on Social and Environmental Considerations.

91. The Expert Group recommended accepting the text of the Guidance on accommodating environmental and social considerations in UNFC (ECE/ENERGY/GE.3/2018/3) without amendment and requested it to be posted to the ECE website and disseminated as widely as possible.

92. The Expert Group requested the various sectoral Working Groups to consider developing additional sectoral-specific guidelines for accommodating environmental and social considerations.

93. The Expert Group requested the Social and Environmental Considerations Task Force to support the development of case studies and best practices documents for the practical application of the guidance in consultation with the various sectoral Working Groups.

94. The concepts and terminology contained in ECE/ENERGY/GE.3/2018/4 should be considered by the UNFC Revision Task Force.

XI. Role of the United Nations Framework Classification for Resources in the delivery of the Sustainable Development Goals (agenda item 9)

Documentation: ECE/ENERGY/GE.3/2018/7 – UNFC supporting the attainment of SDGs – Transforming our world’s natural resources: A step change for UNFC? dated 6 April 2018

95. Mr. Julian Hilton, Chair, SDGs Delivery Working Group, provided an update on the activities of the Working Group. The Expert Group at its eighth session recommended that an SDGs Working Group be established to develop documentation to support the further development and effective use of UNFC to help attain the relevant SDGs and the commitments of the Paris Agreement.

96. He advised that the 2030 Agenda has inaugurated a new era in global development. This era is marked by a new narrative, substituting the previous orthodoxy, expressed in business process language, of pursuing “economic, social and environmental” gains in equal measure, with a commitment to meeting the needs of two key beneficiaries “people” and “planet” through the common goal of sustainable “prosperity” for all. This transformation is proposed in the draft document “Transforming our world’s natural resources: A step change for UNFC?”, which proposes redefining UNFC’s core purpose and underlying principles and assumptions according to the SDGs (ECE/ENERGY/GE.3/2018/7).

97. The members of the SDGs Delivery Working Group are: Mr. Julian Hilton (Aleff Group), Chair, Mr. Brian Birky (Florida Industrial and Phosphate Research Institute), Mr. Jay Choi (Institute of Management Accountants (IMA)), Mr. Vitor Correia (EFG), Ms. Malika Moussaid (Aleff Group), Mr. Manzoor Qadir (United Nations University) and Mr. Harikrishnan Tulsidas (ECE).

98. The panel discussed delivery of the SDGs - Designing outcome focused resource development projects and channelling extrabudgetary funding for the development of a UNFC-based integrated resource management system. The panel emphasised that good concepts are available to test and these concepts could provide the basis for designing project proposals for extra-budgetary funding. Experts who participated in the panel are: Mr. Julian Hilton, Mr. Scott Foster, Mr. Vitor Correia, Mr. Jay Choi, Ms. Malika Moussaid, and Ms. Alessandra Hool (ESM Foundation).

99. The Expert Group noted the work of the SDGs Delivery Working Group. The Expert Group requested that the recommendations contained in ECE/ENERGY/GE.3/2018/7 should be considered by the UNFC Revision Task Force.

100. The Expert Group requested the SDGs Delivery Working Group to further develop methodologies and case studies for the realization of the SDGs within the context of resource management. The Expert Group further requested the Working Group to develop a curriculum, policy objectives, and pilot application protocols to path find potential industrial ecosystem approaches for the delivery of the SDGs and submit this documentation to the tenth session.

XII. Application of the United Nations Framework Classification for Resources in different geographical contexts. (agenda item 10)

Documentation: EGRC-9/2018/INF.3 – Unofficial room document: A guidance for the application of UNFC for mineral resources in Finland, Norway and Sweden

101. Mr. Rodrigo Chanes Vicente, Policy Officer, EC D.G. GROWTH, provided an overview of on-going actions at EU level. He underlined the need for harmonized data at the EU level for primary and secondary raw materials (mining waste, landfills). UNFC has the potential to be applied at the regional, national and EU level and could be useful for transmission and publication of information at the EU level. Member States using national reporting codes for primary raw materials could adopt bridging documents to UNFC.

102. Mr. Alex Nwegbu, President, OAGS, provided a presentation on the need for capacity-building in UNFC-based resource management in Africa.

103. Ms. Teresa Ponce de Leão, President, EuroGeoSurveys (EGS), provided an update on the activities of EuroGeoSurveys. She noted that EGS mineral experts are involved in resource classification at a national level and the experts recognize UNFC as a useful management tool. The EGS Mineral Resources Expert Group (MREG) has a task group working on UNFC-related matters. She drew attention to the Memorandum of Understanding signed between EGS and ECE on 26 April 2018 which will serve to enhance application of UNFC in Europe and beyond.

104. Ms Erika Ingvald, Geological Survey of Sweden, provided an update on the UNFC mineral resources guidelines for the Nordic sub-region (EGRC-9/2018/INF.3).

105. Mr. Frank Mugenyi (AUC) presented an update on the Africa Agenda 2062, 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, which is under development. Mr. Tunde Arisekola (NGSA),

Professor Aberra Mogessie (AMREC Working Group and Consultant, African Minerals Development Centre (AMDC)) and Mr. Frank Mugenyi (AUC) provided an update on the UNFC-AMREC-PARC System. A workshop organized by AUC and AMDC was held on 23 April 2018 in Geneva. AUC will provide support for the work on UNFC-AMREC-PARC. A draft outline of the system has been developed and it will be expanded into a fully-fledged document during 2018.

106. Mr. Wang Yongxiang, on behalf of the Mineral Resources and Reserves Administration Department, P.R. China, introduced the progress on the draft bridging document between the Chinese minerals and petroleum classification and UNFC. The bridging documents were made available for public comment in February to April 2018. No major revisions were envisaged and the documents will be presented for the approval of the Committee on Sustainable Energy in September 2018.

107. Mr. Amita Swamidharma, Indonesian Representative, CRIRSCO, provided an update on the Indonesian Committee for Ore Reserves (KCOMI) Code 2017.

108. Mr. Tawatchai Chualawanich, Bureau of Mineral Resources, Thailand, provided an update on the status of application of UNFC in Thailand.

109. Mr. Georgii Rudko, Chairman, State Commission of Ukraine on Mineral Resources, provided an update on the Ukrainian classification and its adaptation to UNFC.

110. The Expert Group noted the progress made by various initiatives at European Union level to apply UNFC and requested an update be provided to the tenth session. The Expert Group recommended that the Guidance for the Application of UNFC for Mineral Resources in Finland, Norway and Sweden be applied in those countries and also be used as a starting point for other countries considering applying UNFC to mineral resources. The Expert Group also recommended to assess UNFC implementation in other European countries.

111. The Expert Group noted the progress made by AMDC in developing the UNFC-AMREC-PARC System and requested the first draft be submitted to the tenth session.

XIII. Revision of the United Nations Framework Classification for Resources (agenda item 11)

112. The Expert Group discussed the need to revise UNFC, in particular, due to the current emphasis on the SDGs and broadening of its application to encompass renewable energy, injection projects and anthropogenic resources. Moreover, the guidance on social and environmental issues; G-axis recommendations and evaluator guidance also need to be incorporated in the UNFC principles and generic specifications.

113. The UNFC Revision Task Force comprises: Mr. David MacDonald (Chair, Expert Group), Chair, Mr. Kjell Reidar Knudsen (NPD), Mr. Jim Ross (independent expert) and the Expert Group Secretary. The Task Force will be expanded to ensure all UNFC stakeholders and end users are represented.

114. The Expert Group requested that the work to revise UNFC should be considered and that a draft revised version of UNFC principles and generic specifications could be prepared by the UNFC Revision Task Force for presentation to the tenth session. The Expert Group further requested the sectoral Working Groups to develop/update

specifications, guidelines and best practices for the sustainable management of resources based on any revised UNFC classification scheme.

115. The Expert Group requested that the Bureau define the scope and outline of a resource management template that could be used and tailored by stakeholders to establish methods for facilitating resource management for sustainable development. The Expert Group further recommended that this outline form the basis of a set of case studies of examples of current practice by various stakeholders across, where available, all sectors, with an aspiration to provide a template to facilitate resource management for sustainable development.

116. The Expert Group requested that the Bureau prepare a revised terms of reference and present this to the twenty-seventh session of the Committee on Sustainable Energy together with a request to change the name of the Expert Group to the Expert Group on Resource Management to better reflect the imperative of resource management for attaining the 2030 Agenda.

XIV. Extrabudgetary projects and resource mobilization strategy (agenda item 12)

Documentation: EGRC-9/2018/INF.5 – Unofficial Room Document: Project on Integrated energy and water resource management in support of sustainable development in South-east Europe and Central Asia dated 12 April 2018

EGRC-9/2018/INF.6 – Unofficial Room Document: Project on improving national capacities of Central Asian countries to harmonize and implement internationally applicable system of classification and sustainable management of energy and mineral resources dated 12 April 2018

117. The ECE Regional Advisor on Energy, provided an update on the UN Development Account Project on Integrated energy and water resource management in support of sustainable development in South-east Europe and Central Asia (EGRC-9/2018/INF.5) 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 (EGRC-9/2018/INF.6).

118. The Director of the Sustainable Energy Division provided an overview of the project proposal to secure extrabudgetary funding to support the work on UNFC going forwards, noting the challenges and opportunities.

119. The members of the Resourcing Working Group are: Mr. David MacDonald (BP and Chair), Mr. Vitor Correia (EFG), Mr. Sigurd Heiberg (PETRAD), Mr. Julian Hilton (Aleff Group), Mr. Michael Lynch-Bell (KAZ Minerals), Mr. Satinder Purewal (Polestar Oil&Gas and Imperial College), Director, Sustainable Energy Division, and Secretary of the Expert Group.

120. The Expert Group agreed to work with the Bureau to identify donors and secure extrabudgetary funding as a priority.

121. The Expert Group noted with appreciation the ongoing capacity building 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 the UN Development Account); and the UNFC trust fund proposal and requested members of the Expert Group to support and engage in the projects.

XV. Empowering women in resource management (agenda item 13)

122. The Expert Group discussed gender issues in sustainable resource management. A panel with Mr. David MacDonald, Chair, Expert Group (moderator), Ms. Kerstin Brinnen, Swedish Association of Mines, Mineral and Metal Producers (Svemin), Ms. Kim Chi Tran-Gulbrandsen, Petrad, Ms. Malinka Koparanova, ECE, Ms. Carrie McClelland, Colorado School of Mines, and Ms. Jennifer McCoy, EY, addressed a range of issues related to the benefits of addressing diversity and inclusiveness in the resource management sector.

123. 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 update the tenth session accordingly. The Expert Group recommended the Bureau to ensure that diversity and inclusion in resource management are reflected in our membership, work plans and activities.

XVI. Education and outreach (agenda item 14)

Documentation: EGRC-9/2018/INF.4 – Unofficial room document: Promotion and outreach activities of the Communications Working Group in 2017–2018 dated 19 April 2018

124. Ms. Carolina Coll, Co-Chair, Communications Working Group, provided an update on the work and activities of the Working Group since the eighth session of the Expert Group.

125. The membership of the Communications Working Group is: Mr. John Brooks (American Association of Petroleum Geologists (AAPG) Europe (Co-Chair)), Ms. Carolina Coll (IFC-World Bank (Co-Chair)), Mr. Benoit Charpentier (Total), Ms. Isabel Fernandez (EFG), Ms. Tana Garcia Lastra (Corporación de Reservas Estratégicas de Productos Petrolíferos (CORES)), Mr. Sigurd Heiberg (PETRAD), Ms. Jennifer McCoy (EY), Ms. Yang Hua (RIPED, CNPC), Chair and Secretary of the Expert Group.

126. Ms. Bianca Derya Neumann, Intern, ECE, provided an update on the Fourth Meggen Raw Material Days 2018, 12-14 September 2018, Lennestadt-Meggen, Germany.

127. The Expert Group recommended that an educational and training session on UNFC be organized on the first day of the tenth session. The Expert Group requested the Communications Working Group to develop a revised promotion, education and outreach strategy, including the identification of new stakeholders and noted that implementation of the strategy would be subject to extrabudgetary resources being identified.

XVII. Cooperation with other organizations (agenda item 15)

Documentation: EGRC-9/2018/INF.4 – Unofficial room document: Promotion and outreach activities of the Communications Working Group in 2017–2018 dated 19 April 2018

128. Mr. Aaron Johnson, Executive Director, American Institute of Professional Geologists (AIPG) provided an overview of AIPG and opportunities for cooperation with the Expert Group.

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

130. The Expert Group noted with appreciation the Memoranda of Understanding signed between ECE and EFG (6 November 2017⁵) and with EGS (26 April 2018) and the focus of both on promoting UNFC.

XVIII. Other business (agenda item 16)

131. Following discussion and careful review and in the light of the expanded scope of application of UNFC, the Expert Group agreed that its tenth session needs to be held over four days, including an educational and training session on UNFC, but with an option to reduce the total number of days commensurate with the required agenda items.

132. No other issues were raised.

XIX. Adoption of conclusions and recommendations (agenda item 17)

Documentation: EGRC-9/2018/INF.1 – Unofficial room document: Draft Conclusions and Recommendations for the Expert Group on Resource Classification Ninth Session

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

XX. Adoption of the report and close of the meeting (agenda item 18)

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

⁵ http://www.unece.org/fileadmin/DAM/20171106_UNECE-EFG_MoU_final_signed.pdf