
Economic Commission for Europe

Committee on Sustainable Energy

Expert Group on Resource Classification

Sixth session

Geneva, 26–29 April 2016

Item 18 of the provisional agenda

Education and outreach

Education and outreach and activities of the Communications Sub-Committee in 2015–2016

1. The Expert Group on Resource Classification agreed to establish a Communications Sub-Committee at its first session, April 2010. The Sub-Committee is a subgroup of the Expert Group. It was further agreed that the Sub-Committee would be established by and report to the Bureau of the Expert Group between meetings of the Expert Group.
2. The terms of reference of the Communications Sub-Committee as approved by the Expert Group at its fifth session in 2014 are contained in Annex I to ECE/ENERGY/GE.3/2014/6.
3. The membership of the Communications Sub-Committee is provided in Annex I.
4. This document provides an update on the education and outreach activities undertaken since the fifth session of the Expert Group.

I. Communications and education strategy

5. The agreed Communications and Education Strategy developed by the Communications Sub-Committee encompasses presentations on and/or promotion of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC-2009) at conferences and workshops; the relationship with other industry bodies and associations; publications, technical journals and articles; the media; website; and the membership of the Expert Group.
6. It is noted that there continues to be no extrabudgetary funding available to support the work of the Sub-Committee and hence implementation of the strategy remains dependent on the voluntary contributions (travel, man hours and sponsorship) from members of the Expert Group.

II. Current activities

7. Since issuing its report to the sixth session of the Expert Group on Resource Classification (EGRC-6/2015/INF.4), the Communications Sub-Committee has continued to conduct its work through regular e-mail correspondence, as well as via five meetings (one face to face meeting and four audio conferences). A copy of the minutes of all meetings is provided to the Bureau of the Expert Group for information.

8. The key education and outreach activities undertaken by the Communications Sub-Committee are outlined below. It is noted that these activities also serve to promote those widely used systems aligned to UNFC-2009, notably:

- The Committee for Mineral Reserves International Reporting Standards (CRIRSCO) Template for solid minerals;
- The Society of Petroleum Engineers (SPE)/World Petroleum Council (WPC)/American Association of Petroleum Geologists (AAPG)/Society of Petroleum Evaluation Engineers (SPEE) Petroleum Resource Management System (PRMS) for oil and gas, which has been endorsed by SPE, WPC, AAPG, SPEE and the Society of Exploration Geophysicists (SEG), and
- The Organisation for Economic Co-operation and Development (OECD) Nuclear Energy Agency (NEA)/IAEA Uranium Classification (“Red Book”) which is now bridged to UNFC-2009.

A. Conferences and workshops

9. The key focus of the Sub-Committee continues to be the promotion of UNFC-2009 – including, in particular, an understanding of how the system works and its relationship to the CRIRSCO Template, PRMS and the “Red Book”, as well as the work being undertaken to broaden application of UNFC-2009 to renewable energy – at conferences and workshops. The Sub-Committee also works to identify speakers to deliver the presentations.

10. The Sub-Committee is organizing the second UNFC Train the Trainers Workshop in Geneva, 28 April 2016.

11. A list of the conferences at which a presentation on UNFC-2009 and/or the work of the Expert Group was delivered in 2015 is provided in Annex II.

12. In order to deliver on the educational aspect of the Communications and Education Strategy, attention was paid to organizing capacity-building workshops, in particular on the four events listed below:

- (a) UNECE Workshop on UNFC-2009 in cooperation with the Association of Petroleum Geologists of India, New Delhi, India, 10 January 2015 (during Geo-India 2015, 11–14 January 2015)
- (b) UNECE Workshop on UNFC-2009 with focus on Central Asia, Geneva, Switzerland, 28 April 2015
- (c) IAEA-UNECE Regional training course on “United Nations Framework Classification 2009 for Evaluation of Uranium and Thorium Resources and to Leverage Transparent and Effective Communications”, Luxor, Egypt, 18–22 October 2015
- (d) Norwegian Petroleum Directorate, UNECE, Cuban Ministry of Energy and Mines, Cuban National Office for Mineral Resources National UNFC Workshop for Cuba, Havana, Cuba, 7–9 December 2015. This event was organized with the financial support of the Norwegian Oil for Development Programme (NORAD).

13. Other training events and/or workshops on UNFC-2009 were organized, for example by the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) and the International Atomic Energy Agency – the full list is, as mentioned above available in Annex II.

14. Following each workshop, a review is made of the event and those elements considered to be successful are then incorporated into future events. The programme for the workshops, as well as the standard presentations delivered, are continually reviewed and updated.

15. A copy of all the presentations delivered at the workshops is posted to a dedicated page on the ECE website. Where appropriate, ECE press releases are issued either immediately prior to or immediately following the close of the event. Articles are also prepared for publication in the ECE's weekly newsletter "UNECE Weekly".

B. PowerPoint presentations, articles and other promotional and educational material

16. Work has continued on development of a series of standard PowerPoint presentations on UNFC-2009 varying in length and technical content. The Technical Advisory Group has provided valuable feedback. The presentations continue to be updated to reflect UNFC developments.

17. The educational animated presentations with voice-over explaining UNFC-2009, how its three axes work and the relationship with aligned systems, has been translated into other languages, including Chinese and Hungarian. The presentation is now shown at workshops and is also included in Pan-European Reserves and Resources Reporting Committee (PERC) training courses.

18. The following press releases, which are available to view on the UNECE website¹, were issued by UNECE in 2015–2016:

- (a) UNFC can help investors devise solid financing plans for renewables (issued on 07 May 2015);
- (b) Guidelines for application of UNFC to uranium and thorium resources released for public comment (issued on 25 June 2015);
- (c) Specifications for application of UNFC to injections projects for geological storage of CO₂ released for public comment (issued on 8 July 2015);
- (d) Workshop discusses the use of UNFC in Egypt (issued on 22 October 2015);
- (e) Cuba reviews benefits of UNFC for economic development (issued on 10 December 2015);
- (f) New publication demonstrates UNFC can be applied to nuclear fuel resources (issued on 6 January 2016);
- (g) SWITCH – Discover the Future of Energy coming to the UN Cinema on 27 April (issued on 19 April 2016); and

¹ <http://www.unece.org/index.php?id=23864>

(h) Discussing the application of Resource Classification to renewable energy sources (issued on 20 April 2016).

19. Articles related to the above press releases were published in the ECE's weekly newsletter "UNECE Weekly" during 2015–2016.

20. UNFC-2009 was referenced in the International Energy Agency's World Energy Outlook 2016 issued in November 2016.

21. UNFC-2009 was referenced in "Halland, Havard; Lokanc, Martin; Nair, Arvind; Kannan, Sridar Padmanabhan. 2015. The Extractive Industries Sector: Essentials for Economists, Public Finance Professionals, and Policy Makers. World Bank Study; Washington, DC: World Bank. © World Bank, published on 19 August 2015.

22. A case study "Framework for the Evaluation of Anthropogenic Resources: a Landfill Mining Case Study – Resource or Reserve?" by Andrea Winterstetter, David Laner, Helmut Rechberger, and Johann Fellner was published in the Springer Journal "Resources, Conservation and Recycling", edition 10 January 2015, Online ISSN 1613-7566.

23. The article "Consolidating minerals classifications for better management: the UNFC initiative" was published in the European Geologist Journal, 39th edition, May 2015.

24. An article "UNFC –a universal classification for energy resources" was published in the Romanian edition of Energy Economic, Q3 2015.

D. Website

25. Changes continue to be made to update and improve the Expert Group and UNFC web pages on the ECE website², notably with regard to accessibility, re-organization of existing information and the addition of new material as regularly as possible.

III. Future work plans

26. The Communications Sub-Committee will carry on working according to its Terms of Reference and will continue its efforts to implement the agreed Communications and Education Strategy.

27. Regular and/or annual meetings of relevant societies and professional associations will be identified to ensure that a presentation on UNFC-2009 is included.

28. Efforts will continue to prioritize events to attend in 2016 and also 2017 (Annex III).

29. The Communications Sub-Committee will focus on organizing a series of webinars on UNFC in 2016. The topics currently being considered are as follows:

(a) Basics on classification and reporting using UNFC (on demand, recorded) and perhaps live for universities

(b) SPE PRMS to UNFC and vice versa including examples (live)

² <http://www.unece.org/energy/se/reserves.html>

- (c) CRIRSCO Template to UNFC and vice versa including examples (live)
 - (d) Renewable energy resources classification using UNFC: Geothermal (on demand, recorded)
 - (e) Renewable energy resources classification using UNFC: Uranium resources (on demand, recorded)
 - (f) Application of UNFC for injection projects for CCS (on demand, recorded)
 - (g) PRMS and CRIRSCO Template reports for energy reporting users from an UNFC inventory (live)
 - (h) Portfolio Project analyses through UNFC: from exploration to abandonment (on demand, recorded).
30. A series of Frequently Asked Questions (FAQs) on UNFC-2009 and the Expert Group on Resource Classification will be developed which will be posted to the UNFC web pages. As needed, the advice of the Technical Advisory Group will be sought.
31. Focus will also be given to seeking new members for the Expert Group, particularly from the solid minerals and renewable energy sectors.
32. The Sub-Committee will offer its support to the Bureau of the Expert Group in its efforts to secure extrabudgetary funding.

Annex I

Communications Sub-Committee Members

Co-Chairs

John BROOKS, American Association of Petroleum Geologists European Region (AAPG-Europe)

Carolina COLL, BG Group

Members

Benoit CHARPENTIER, Total

Sigurd HEIBERG, Petronavit a.s.

David MACDONALD, Chair, Expert Group on Resource Classification and BP

Daniel TROTMAN, Ernst & Young LLP

YANG, Hua, Petrochina

Secretary, Expert Group on Resource Classification

Annex II

Conferences and other events in 2015 at which UNFC-2009 was presented and/or promoted

1. UNECE Workshop on UNFC-2009 in cooperation with the Association of Petroleum Geologists of India, New Delhi, India, 10 January 2015 (during Geo-India 2015, 11–14 January 2015)
2. Meeting of the Cuban Commission for UNFC, Havana, 14 January 2015
3. 2nd Session, UNECE Group of Experts on Gas, Geneva, Switzerland, 20–21 January 2015
4. 40th Stanford Geothermal Workshop, Stanford University, California, United States, 25–28 January 2015
5. UNFC presentation to National Officials, Yaoundé, Cameroon, end-Jan/early Feb 2015
6. CCS-M Workshop (C1W1): Indonesia Case Study on CCS-Geological Storage, Bali, Indonesia, 25–27 Feb 2015
7. APPEX Global Conference, London, United Kingdom, 3–5 March 2015
8. UNFC-2009 Geothermal Specifications Working Group Workshop, Washington, United States, 4–5 March 2015
9. UNFC Bioenergy Webinar, 6 March 2015
10. 51st Nigerian Mining and Geosciences Society Conference, Lagos, Nigeria, 15–20 March 2015
11. Presentation to business students, University of Alberta, Alberta, Canada, 19 March 2015
12. CCOP - KIGAM Unconventional Oil and Gas Resources Project: Coordinators Meeting and Technical Session, Thailand, 21–22 March 2015
13. Central European Initiative (CEI)-JRC European Workshop on Advanced Biofuels, Biorefinery and Bio-Economy", Trnava, Slovakia, 25-27 March 2015
14. UNFC Bioenergy Webinar, 27 March 2015
15. Presentation to petroleum engineering students, Southern Alberta Institute of Technology, Calgary, Canada, 8 April 2015
16. Applying the United Nations Classification for Fossil Energy and Mineral Reserves and Resources 2009 (UNFC) for Decision Support in Public-Private Partnerships, Oslo, Norway, 15 April 2015
17. UNFC Bioenergy Webinar, 17 April 2015
18. World Geothermal Congress, Melbourne, Australia, 19–25 April 2015
19. CCS-M Seminar/Workshop 4 (S4): Classification and Reporting of Oil and Gas Resources and Reserves, Bangkok, Thailand, 22–23 April 2015

20. UNECE UNFC Workshop, Geneva, Switzerland, 28 April 2015 (as part of EGRC Sixth Session)
21. UNFC Train the Trainers Workshop, Geneva, Switzerland, 30 April 2015 (as part of EGRC Sixth Session)
22. EGRC Sixth Session, Geneva, Switzerland, 29 April – 1 May 2015
23. Training Course on Petroleum Resources Classification for the Petroleum Ministry of Sudan, Beijing, China, 11 May 2015
24. Hanson Wade 'Reserves Estimation Unconventionals Canada' 2015, Calgary, Canada, 26 May 2015
25. Open-ended consultation of the Committee on Sustainable Energy, Geneva, Switzerland, 27–28 May 2015
26. CCS-M Malaysia Case Study: Workshop on CO₂ Storage Site Selection, Kuala Lumpur, Malaysia, 2–4 June 2015
27. China and Ukraine Workshop on " National Mineral and Petroleum Resources Classification Systems and Mapping to UNFC", 2–5 June 2015, Beijing, China
28. Global Methane Initiative (GMI) Coal Subcommittee Meeting and Coal Mine Methane Workshop, Bogotá, Colombia, 3-4 June 2015
29. EuroGeoSurveys Mineral Resources Expert Group (MREG) Meeting, Uppsala, Sweden, 22–23 June 2015
30. Bioenergy Webinar, 10 July 2015
31. IAEA and Vice Ministry of Mines and Energy of the Republic of Paraguay National Training Course on Geology, Geophysics and Geochemistry for Discovery and Evaluation of Uranium Deposits, Asuncion, Paraguay, 3–7 August 2015
32. IAEA and Vice Ministry of Mines and Energy of the Republic of Paraguay National Training Course on Policy, Environmental and Regulatory Aspects of Uranium/Radioactive Minerals Exploration and Mining, Asuncion, Paraguay, 10–14 August 2015
33. 11th Annual Ryder Scott Reserves Conference, Houston, United States, 2 September 2015
34. CCOP – Department of Mineral Fuels (Thailand) Workshop: Maximizing the Value Of Oil and Gas Resources, Bangkok, Thailand, 8–10 Sep 2015
35. InterEnerStat 2015, Paris, France, 14–15 September 2015
36. Geothermal Resources Council 39th Annual, Reno, Nevada, United States, 20–23 September 2015
37. CCOP – KIGAM Unconventional Oil & Gas Resources Project: Technical Workshop 3, Chiangmai, Thailand, 22–24 September 2015
38. Canadian Society of Petroleum Geologists, Fall, 2015

39. Second International Scientific-Practical Workshop “Subsoil Use in Ukraine. Prospects for Investment. Resources Classification: Status, Mapping and Application”, Truskavets, Ukraine, 4–8 October 2015
40. Joint UNECE TAG and GKZ Meeting on Bridging Document, London, United Kingdom, 12–13 October 2015
41. Second Session, UNECE Group of Experts on Renewable Energy, Geneva, Switzerland, 12–13 October 2015
42. Nordic UNFC Project Workshop, Geological Survey of Norway, Trondheim, Norway, 13 October 2015
43. Association of the Organizations for Subsurface Use “National Association for Subsoil Expert Appraisal” (AOON “NAEN”) and FBO GKZ Forum “Hydrocarbons: oil and gas base, geological exploration, reserves expert appraisal”, Moscow, Russian Federation, 14–15 October 2015
44. EU Seminar on Raw Materials, Brussels, Belgium, 15–16 October 2015
45. IAEA-UNECE Regional training course on “Regional training course on United Nations Framework Classification 2009 for Evaluation of Uranium and Thorium Resources and to Leverage Transparent and Effective Communications”, Luxor, Egypt, 18–22 October 2015
46. XVI Brazilian Meeting on Minerals Processing and Extraction Metallurgy, Poços de Caldas, State of Minas Gerais, Brazil, 22 October 2015
47. EY Financial Reporting Outlook Conference, London, United Kingdom, 2 November 2015
48. CCS-M Indonesia Case Study: Workshop on Public Engagement of CCS Projects, 4–6 November 2015, Surabaya, Indonesia
49. Primer Congreso Internacional de Minería, Panama, 11–12 November 2015
50. IAEA Workshop on Uranium Exploration, Mining and Processing in Francophone Africa, 16–20 November 2015, Vienna, Austria,
51. Twenty-fourth Session, UNECE Committee on Sustainable Energy, Geneva, Switzerland, 18–20 November 2015
52. The City of London Geoscience Forum on Resource and Reserve Reporting in the Petroleum and Mining Industries, London, United Kingdom, 19 November 2015
53. EuroGeoSurveys MREG Meeting, Vienna, Austria, 24 November 2015
54. National UNFC Workshop for Cuba, Havana, Cuba, 7–9 December 2015

Annex III

Conferences and other events in 2016 and 2017 at which UNFC-2009 has been or will be presented and/or promoted

2016

1. Presentation to University of Southampton, Southampton, United Kingdom, January 2016
2. CCS-M Workshop on CO₂ Storage and EOR technologies, 2–4 March 2016, Hanoi, Vietnam
3. Beijing Reserves Seminar, 8–9 March 2016, Beijing, China
4. Nigerian Mining and Geosciences Society 52nd Annual International Conference & Exhibition “Economic Diversification through Sustainable Mineral Resources Development”, Ilorin, Nigeria, 13–18 March 2016
5. SPE Workshop “Economics, Financing, and Risk Management of Petroleum Projects”, London, United Kingdom, 21–22 March 2016
6. IAEA Project Co-ordination Meeting and Workshop on Socio-economic outlook of radioactive and associated minerals production in Asia, 22–25 March, Yogyakarta, Indonesia
7. IAEA Training Workshop on Uranium Exploration Methods, Mendoza, Argentina, 11–15 April 2016
8. SPE Applied Technology Workshop on Petroleum Reserves & Resources, Abu Dhabi, United Arab Emirates, 18–19 April 2016
9. IAEA UNFC Consultancy Meeting, Geneva, Switzerland, 25–26 April 2016
10. UNFC Workshop, Geneva, Switzerland, 26 April 2016
11. EGRC Seventh Session, Geneva, Switzerland, 27–29 April 2016
12. ASCOPE 81st National Committees Meeting, Bandar Seri Begawan, Brunei, 23–25 May 2016
13. EUROPEC SPE/EAGE 78th Annual Conference & Exhibition Workshop “Renewables including Carbon Capture, Storage and Disposal”, Vienna, Austria, 30 May 2016
14. CCS-M Workshop on CO₂ Storage and CO₂ for EOR, Hanoi, Vietnam, 7–8 June 2016
15. Joint SPE/SPEE Education Seminar, London, United Kingdom, 13 June 2016
16. SPE Reserves, Resources and Definition Workshop, 15–16 August 2016, Kuala Lumpur, Malaysia
17. IAEA and UNECE Interregional Workshop on “Uranium, Coal and Oil & Gas: Towards a better understanding of energetic basins and application of UNFC-2009”, Ulaan Baator, Mongolia, 16–19 August 2016 (date tbc)
18. Thirty-fifth International Geological Congress, Cape Town, South Africa, 27 August–4 September 2016

19. Society of Petroleum Engineers (SPE) Annual Technical Conference and Exhibition (ATCE), Dubai, United Arab Emirates, 26–28 September 2016
20. UNECE Committee on Sustainable Energy, Geneva, Switzerland, 28–30 September 2016

2017

1. SPE Reserves & Resources Evaluation and Reporting Workshop, March 2017 (TBC), Beijing, China
 2. SPEE Annual Conference, London, United Kingdom, 10–13 June 2017
 3. 22nd World Petroleum Congress, Istanbul, Turkey, 9-13 July 2017
 4. AAPG Annual Conference, London, United Kingdom, September 2017 (date tbc)
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